

College dormitories, and the six off-campus fraternities had given up their houses at the beginning of the war. Moreover, very few apartments of any kind were available in Schenectady. The College considered buying a large building near the campus, but found that it would be prohibitively expensive to renovate, and that the use might be barred by the zoning laws.

The only solution was to build on the campus; several sites (immediately north of Butterfield Hall, in the Pasture, and at the corner of Nott Street and Lenox Road) were considered and rejected before acting president BENJAMIN WHITAKER and Comptroller ANTHONY HOADLEY chose the 3.2 acre plot on Nott Street, east of the house at 642 and surrounding the Delta Phi fraternity house.

The Border Construction Co. erected the first sixty-one units, and Anthony P. Miller, Inc., of Atlantic City, New Jersey, the remainder. The Federal Public Housing Authority paid for the construction, while the College and the State of New York shared the cost of preparing the site, building roads and sidewalks, and installing utilities. The first twelve families moved in on November 1, 1946, and a total of thirty-six apartments were occupied in the fall. Twenty-five more were occupied at the beginning of April 1947.

There were eventually seventy-eight apartments—of which forty-two were four-room units, and the rest three-room—occupied in toto by 325 adults and about 60 children below school age.

Though officially "Reconversion Housing Project for Veterans (F.P.H.A. no. N.Y. V-30195)," the project was dubbed "Dutchmen's Village" by the trustees on November 2, 1946—an apt name in that many of the residents saw themselves as a community apart. Although the apartments had all the predictable defects of cheap, temporary housing and the grounds were often muddy, spirits among both the students and the instructors were generally high.

The dormitories were made a little more village-like in 1949 when the Carpenter's and Painters Union, with help from the Chamber of Commerce, donated most of the labor to erect a fence along Nott Street and between some of the buildings. A few years later, however, the College was eager to tear down the rapidly deteriorating buildings as soon as possible rather than waste money trying to maintain them. The first seven structures were razed in October of 1953 to make way for the Memorial Field House; more were demolished in the summer of 1954, and the last in the summer of 1955.

To accommodate single students during this period, the College also built several temporary dormitories in the Pasture (see VETERANS' HOUSING).

Economics Department. Until near the end of the nineteenth century, what we call economics was generally known, at Union and elsewhere, as "political

economy." ("Political" in that it dealt with economic subjects primarily from a governmental perspective, it is consequently also considered an ancestor of the field of POLITICAL SCIENCE.)

Because course-level records of Union's first quarter century are sketchy, it is impossible to ascertain the extent to which political economy may have been taught during that period. By 1824 the standard course of study included lectures on political economy; under the revised curriculum of 1828, these were joined by recitation sections, and the subject became a required course for third-term juniors. The Rev. THOMAS REED '26 began teaching it in 1831 as Adjunct Professor of Political Economy and Intellectual Philosophy. That same year, the Rev. ALONZO POTTER '18, formerly Professor of Mathematics and Natural Philosophy, returned to the faculty as Professor of Rhetoric and Moral Philosophy, serving until 1845; though not known to have taught the subject, Potter was a genuine political economist. An excerpt from his 1840 book, *Political economy*, was being used in the department's History of Economic Thought course in 1990.

The text Union used by 1840, French economist Jean-Baptiste Say's *Political economy*, establishes the course recognizably as economics at a state-of-the-art level. A clear expositor of what we now call classical economics, Say is famous for "Say's Law," arguably overturned by the Keynesian revolution but still well-known. Lectures on political economy moved to the senior year, and all students also took moral philosophy, which was integrally related in its intellectual development to the later discipline of political economy (see PHILOSOPHY).

From 1840, the catalogues began to list "departments" (which were not departments in the modern sense, but courses of study; see DEPARTMENTS, DIVISIONS AND CENTERS); among these was a "Department of Moral and Political Science." All students were required to study "Say's *Political economy*, with lectures by the professor and dissertations by the pupils," though subsequent years saw minor variations between the requirements for the scientific and classical students. An 1852 listing of departments "organized or about to be organized" grouped political economy with logic, but the political economy requirement remained unchanged. In 1855 and 1856, the political economists evidently lost a bit of autonomy but discovered their voices: the required course in "Political Economy, composition and declamation" was listed under "Intellectual, Moral, and Political Science."

It is not always clear who taught political economy. Even before Reed shifted to Latin in 1849, his lectures had apparently been assigned for a few years (1838–43) to the German-born professor of political economy and German literature, JOHANN LUDWIG

TELLKAMPF, who had previously lectured on political economy at the University of Göttingen. Although primarily interested in law, Tellkampf also published articles and later books on money and banking.

Another German, ELIAS PEISSNER, who joined the faculty in 1851 principally to teach languages, soon began lecturing on political economy, although "Lecturer in Political Economy" was not added to his title until 1857. He joined the Union army as a colonel in 1862 and was killed the next year at the Battle of Chancellorsville.

In 1857, a "Department of Political Economy" appeared in the catalogue:

A course of Lectures on this subject are delivered in the Second Term of the Junior Year. They are arranged as follows: Definition and Method; Geographical and Ethnographical Review of the Earth; its distribution among Tribes and Nations, with the origin of National and Private Property; Historical Sketch of Civilization; Elements of Society; Departments of Human Labor, including Government, School, and Church; Development of Money (metal and paper); Value and Price of Labor and Products; Capital and Land; Taxation; Harmony between the different departments of Labor, with its obstructions in different nations; Population and Production; Historical Sketch of Modern Industry; Present State of Nations.

In contrast to this ambitious agenda, the reality at Union for the next half century was more modest. Political economy was usually taught but occasionally omitted; the number of recitations in the subject reported to the Regents shows that it had only a minor place in the curriculum. By 1868 the catalogue description merely promised: "In this department it is designed to give the student a sufficient knowledge of the elements of Political Economy to enable him to read and converse on the subject intelligently." Neither of the two new texts adopted during the next decade were by authors of Say's stature.

During this period, accounting made a fleeting appearance in the College's curriculum under curious circumstances. On Union University's establishment in 1873, the Troy Business College was briefly one of its components; probably to cement this relationship, in the spring of that year Union required all seniors to take a term of bookkeeping, taught by the Troy Business College's professor J.R. Carnell.

Although economics generally played a small role in the curriculum, there were periods of evident ambition: in 1885 the Department of Political Economy (still included in "History and Political Economy") set a broad agenda. A standard textbook was to be supplemented by readings in John Stuart Mill, John Elliott Cairnes, and Henry George, all influential economists.

Under the new curriculum adopted in 1897, the course was finally called "Economics." Now included in a Department of History and Sociology and required for all students, including engineers, it met

three hours per week in the first term of the senior year. The course description, acknowledging the existence of multiple schools of economic thought, noted: "Particular attention is given to the subject of the Organization of Industry, to Markets, Prices, Wages, the theory of Demand and Supply, and to Money and Banking."

The emphasis on practical affairs is also evident in the BUTTERFIELD LECTURE COURSE, 1892-97, whose twenty-eight lecturers included, along with politicians, generals, and diplomats, eminent individuals discussing labor, banking and finance, wealth and its uses, and protective tariffs.

In 1910 economics and sociology split from history to form a new department with a decidedly economic bent, including two separate courses in elements of economics: a one-term course required for most engineers, and a full year course required of all other students. Interestingly, the department's other economics course was Economic History, treating "the economic history of England from the tenth century to the present time, and the leading events in the economic history of the United States." In 1912/13 the curriculum was restructured again to include some financial history.

While Union clearly was no hotbed of innovative thinking in the field, the discipline was not necessarily marginal or somnolent at the College. Rather, the Union experience was probably a result of several broader developments.

First, much of economic theory was being evaluated in England and on the continent. In 1890 Alfred Marshall published *Principles of economics*, pulling together substantial strands of classical theory into neo-classical economics. Although they participated in some of the theoretical debates, most American political economists were more pragmatically oriented.

Second, the study of economics was inextricably linked not only with morality and religion but also with philosophy and logic. In England, with its relatively insular academic community, the evolution of these discussions was also strongly linked, as J.M. Keynes' biographer Robert Skidelsky points out, with the loss of religious belief on the part of the English intelligentsia. Colleges in the United States were much less likely to be caught up in this kind of debate, and, indeed, intense social activism often had a religious basis even among the intelligentsia, at Union and elsewhere.

Third, and perhaps most important, economic analysis in this country was closely connected, intellectually and practically, with policy issues studied also by historians, political scientists, and sociologists. This tendency is reflected in the *Johns Hopkins University studies in historical and political science*, launched in 1883. Most of its first monographs were political and historical, but by 1908, although the series title did not

change, the department of political economy joined history and political science in its direction, and it has continued to publish monographs in all three fields, as well as hybrids thereof. Union's social science curriculum suggests that some of that interdisciplinary approach was also at work here, although the College's political economics faculty could not be said to have helped shape the discipline.

In 1918 Union ceased offering sociology for several decades, leaving economics as a separate department with a single professor. In the fall of 1919, at the recommendation of trustee (and General Electric president) EDWIN W. RICE JR., all engineering majors were required to take a term of elementary economics. This requirement continued in one form or another through 1949, and returned in 1957, ending finally with the introduction in 1965 of the Comprehensive Education curriculum.

In his 1925/26 midwinter report, as the College was growing larger and stronger, President Richmond urged, "Certain departments must be strengthened, particularly economics, a subject of great importance, especially in a community like ours." When the College moved in 1927 to enlarge the department, the wording of a *Concordiensis* report suggested that recent economics teaching had left little trace in the institutional memory: "The advent of a department of economics was long expected to take place at Union. For economics has begun to be considered one of the fundamental subjects for study for all college students.... Colleges throughout the country, since 1900, have been led to form departments of economics because of the realization that all ought to know the social structure and organization in which man lives and in which he earns his living."

Leading the "new" department was WILLIAM WHIPPLE BENNETT (PhD Princeton) 1927–63, a specialist in money and banking, and labor relations, who helped enrich the curriculum in the 1930s and 1940s, and served as chair until 1955. During that time, the economics faculty grew from one to five, though not mainly within a department framework. In the Depression year 1934, against a backdrop in all of American higher education of shrinking resources, Union implemented a faculty and curricular reorganization drafted by a committee under economics professor EARL EVERETT CUMMINS. The new structure, intended to save money and yield educational benefits by deemphasizing departments, reorganized the College's eighteen disciplines into four divisions. Economics became one of the "fields" within the Social Studies Division (which was frequently chaired during the next three decades by economists).

Cummins (PhD Yale), at Union from 1931 until his untimely death in 1938, was a labor economist and the author of a successful textbook, *The labor problem in the United States* (1931; rev. 1935). Bennett's other

significant pre-war appointments were JOSEPH ROTUNDO and BENJAMIN WHITAKER. Rotundo, a 1929 Union College graduate with no advanced degrees, who joined the economics department in 1935, had earlier (1929/30) taught in the English department. Also a labor economist, he became a very popular teacher; like Cummins he died early, in 1953. Whitaker (PhD Yale) 1939–66, hired as Cummins's successor, came to Union after six years in various positions in Connecticut state government, including Budget Director.

After the Second World War, John Prior Lewis '41 (PhD Harvard 1950), perhaps the most distinguished academic economist among Union's graduates or former faculty, served in the economics department for four years (1946–50). He left for Indiana University, and was later appointed to President Kennedy's Council of Economic Advisors and to the Princeton University faculty.

Lewis appears to have gotten along quite well with his faculty colleagues at Union, although, unlike them, he taught the new and "radical" theories of John Maynard Keynes—among the greatest economists of all time—and Paul Samuelson, who later won a Nobel Prize and whose newly-published textbook would eventually dominate the introductory economics book market and strongly influence the teaching of undergraduates for decades. Although Lewis did not know it, long-time College treasurer FRANK BAILEY, upset with what he had heard about Lewis's teaching, dispatched a trusted friend to inspect the department. Bailey concluded that Lewis taught "unsound" economics. Other department members apparently regarded the inspection as unimportant (or even a joke) and it played no role in Lewis's leaving, but Bailey's concern about "left teaching" turned into a troublesome crusade, described in the article about him.

Even after Lewis's departure, the department was an unusually strong one, thanks primarily to the long and fruitful tenures of Bennett and Whitaker. LAWRENCE ABBOTT (PhD Columbia), 1953–68, who replaced Rotundo, later played a significant role as well. All three chaired the department, and Bennett and Whitaker also chaired the Social Studies Division. Bennett served for a decade (1935–45) as part-time Coordinator of Student Activities, while Whitaker served as Union's comptroller (1943–45) and then stepped in, after President Dixon Ryan Fox died in office, as acting president (February 1945–February 1946).

The department's offerings at that time would now be considered an undergraduate business major, including such courses as accounting—which both Whitaker and Bennett taught before the 1947 arrival of HAROLD GARDNER AVERY (PhD Columbia)—corporate finance, marketing, labor and industrial relations, and managerial economics. Like some other

departments, economics had until 1962 a strong board of visitors, including academics and business people. A solid Industrial Administration major launched in 1948 featured a substantial concentration in economics. The department (and indeed the division) appeared to have taken great pride in producing future business executives.

With the exception of Abbott, whose *Quality and competition; an essay in economic theory* (1955) proposed a new theory of competition, Union's faculty appears to have been interested less in specialized theorizing and more in the application of intelligence to real problems. Much later, in *India's political economy* (1995), John Prior Lewis clearly stated his own view: "As a visiting economist, I have always been fascinated by Indian government...in the real world economics has always been political economy." Bennett served during the Second World War as a part-time hearings officer and arbitrator for the War Labor Board; Cummins ran twice for public office (unsuccessfully), Rotundo helped General Electric workers form what became the United Electrical, Radio, and Machine Workers of America, and Whitaker served as a consultant to the New York and several other state governments on tax issues.

Bennett, Avery, Whitaker, and Abbott retired between 1963 and 1968. Although Norman Andrew Mercer (PhD Harvard), 1958–68, and Alfred L. Thimm (PhD New York University)—a member of the department from 1960 to 1969, but occupied with direction of the GRADUATE MANAGEMENT INSTITUTE after 1961—provided some continuity for a few more years, the department's transition during 1968–73 to a new nucleus of faculty can only be called turbulent. The majority of department members did not yet have doctorates, and consequently during this period economics had more instructors and lecturers than senior faculty. Of the seventeen faculty members in residence at some time during those years, only two were full professors.

One reason is easy to identify: demand for faculty rose rapidly beginning in the mid-1960s as the baby boom generation began to attend college in record numbers. Four members of the new generation remained for the balance of their academic careers: Peter Anthony Prosper (PhD Cornell) 1964–99, a specialist in labor economics and industrial relations; Thomas Richard Kershner (PhD Harvard), 1968–98, interested in macroeconomic theory and economic forecasting; E. Dwight Haup (PhD Virginia), who pursued his fields of international finance and monetary theory from 1972 until his untimely death in September 1990, and James M. Kenney (PhD Stanford), a specialist in managerial and environmental economics who arrived in 1972 and is still teaching.

Tension over the degree to which the department should emphasize a pragmatic and often institutional

approach rather than economic theory and quantitative methods peaked, not for the last time, in 1969 when the College hired as department chairman Robert S. Herman '41 (PhD NYU). Herman, who had combined an academic career with long-time service to the New York State division of the budget and other parts of state government, served as chair until 1971 and left the College in 1974.

Kershner's eight-year chairmanship (1973–81) saw the appointment of four more faculty who were still in the department at the end of the period covered by this book: Bruce Reynolds (PhD Michigan), 1974– (economics of China; comparative economic systems); Shelton S. Schmidt (PhD Virginia), 1974– (industrial organization; econometrics, efficiency measurement); J. Douglass Klein (PhD Wisconsin), 1979– (industrial organization, energy economics, efficiency measurement); and Bradley G. Lewis (PhD Chicago), 1979– (financial analysis; economic history). The last department member tenured by 1990, Harold Fried (PhD North Carolina), 1983–, is a specialist in efficiency measurement, international trade, and econometrics.

For tenure-track faculty, Kershner typically sought candidates with undergraduate degrees from small liberal arts colleges and PhDs (in hand or prospective) from highly-ranked universities with high research expectations. This fit a college in which strong teaching was still expected for tenure, a PhD or equivalent was required to remain on the faculty, and scholarship was becoming expected rather than optional, and in which faculty, even at smaller colleges, increasingly identified with their disciplines rather than their institutions.

The new department eventually taught a curriculum revised significantly from the previous one in a much altered college-wide environment. Although women had taught in the department as early as 1972, the first to earn tenure, Therese McCarty (PhD Michigan), a specialist in public finance and the economics of education, did not join the faculty until 1987.

The department required all economics majors to take not only introductory economics but also intermediate courses in microeconomics, macroeconomics, and statistics and to complete a two-term senior thesis project. Perhaps more than most liberal arts college economics departments, Union's faculty emphasized quantitative research, and it was able to find or raise money for improved computers and datasets at an early stage. Accounting was now taught by the Graduate Management Institute rather than in the department, and the elective courses in the curriculum were more typical of those offered in graduate programs, albeit at the undergraduate level.

Still, Union's economics department remained unlike those of many other liberal arts colleges in offering courses in finance, labor and collective bargaining, and managerial economics; requiring a senior project,

usually quantitative, of every major; and offering majors not only in economics but also in managerial economics and industrial economics. Its graduates also typically continued to seek careers in business (especially banking and finance) and the professions, with few of them choosing to do PhD work in economics. Particularly in the 1980s, enrollments increased substantially and the department began to win some recognition for its research output among liberal arts colleges.

Mirroring national trends in the field, the economics faculty's scholarly output was mainly in the form of journal articles or contributions to edited collections, rather than monographs.

The department was also affected by college-wide changes from a semester to a three-term calendar (1966); from Comprehensive Education to a new general education program (1977); and, beginning with the HAROLD MARTIN administration in 1965, by an increased emphasis on published research as well as strong teaching as a condition for earning tenure, promotion, and merit pay raises. The department had an average of fourteen faculty members from 1988 to 1991, compared with a typical size of eight to nine in the 1970s and five to seven in the 1950s and 1960s.

Although there are exceptions, it seems fair to generalize that, compared to peer institutions, Union's department has remained more oriented toward applied than toward theoretical economics. It has produced many successful business executives but relatively few professional economists for a college of Union's size and stature. Among its students and faculty, Alonzo Potter and John Prior Lewis probably earned the highest reputations in the broader intellectual world.

Soon after the department was re-invigorated under Bennett, offices were created for it in Washburn Hall. Economics moved to Bailey Hall in 1935 and to the Social Science Building in 1967.

Department Chairs: 1927–55: William Whipple Bennett; 1955–62: Benjamin Palmer Whitaker; 1962–66: Lawrence Abbott; 1966–68: Norman Andrew Mercer; 1968–69: Alfred L. Thimm (Acting Chair); 1969–71: Robert S. Herman; 1971–73: John Richard McNamara; 1973–81: Thomas R. Kershner; 1981–85: E. Dwight Phaup; 1985–88: Peter A. Prosper Jr.; 1988–91: Shelton S. Schmidt.

—Bradley G. Lewis

Educational Studies Program. Union graduates have of course become teachers at all levels from the College's earliest days. Not only were nineteenth- and early twentieth-century secondary school teachers not required to be licensed, but they also were often entirely without college study. It was also common for college students to take off a term or more in order to earn a little money by teaching grammar school.

Only once before the twentieth century is Union known to have offered its students instruction in pedagogy. Writing to the Board of Regents on the work for 1843, the College reported:

Lectures were also delivered [to the Senior Class] in Normal Instruction, and extra classes were formed in Latin composition and the Greek Tragedies, with special reference to a preparation for teaching. So many graduates engage in this employment, that it is thought important to furnish them with some theoretical and practical instruction in regard to the objects of teaching, the best methods, &c. &c.

This special instruction apparently ceased soon thereafter; no other mention of it has been found.

In response to New York State requirements for a teaching certificate, the College began in the fall of 1929 to offer courses in the History of Education and in Educational Psychology. A year later, courses in Principles of Education and Methods of Teaching were added. Practice teaching in local schools was a part of the program from about 1936.

During the three decades (1928–59) that they were taught by psychology professor FRANKLIN CHILLRUD, the four courses changed somewhat in response to alterations in the state certification requirements. When the state began after the Second World War to require a fifth year of college work for a teaching certificate, Union instituted a Master of Education program, of which the education component was the same four courses. Between 1949 and 1966, thirty-one people earned this degree, some of them through the Evening Division.

Citing the low enrollments, the College closed the Education program four years after Chillrud's retirement, admitting no new students after 1962/63.

Reports in the early 1980s, such as those issued by the National Commission for Excellence in Teacher Education and the Carnegie Task Force on Teaching as a Profession, recommended a broad liberal arts education and strong academic majors as the appropriate background for prospective teachers. At the same time, reports such as *A nation at risk* emphasized the dire state of American education and the need for a national response to the problems of schools. With the growing debate on the quality of teacher preparation, Union faculty and administrators began in the mid-1980s to plan a program to prepare teachers who would not only be effective and creative in the classroom, but who might provide leadership to the profession.

Initial efforts came from Associate Dean of Graduate and Continuing Studies Joan Krejci and Associate Dean of the Faculty Terry Weiner. Surveys of the faculty and studies of programs at similar institutions led eventually to Krejci's application for a grant to support the planning and creation of a program at Union. In 1987, the College received \$97,000 from the Fund for the Improvement of Post-Secondary Education.

Janet McDonald was hired in January 1988 as the program's first director, and Krejci and McDonald began to design the program. Not conceived as a separate department, it drew instead on the College's existing faculty. Fundamental to the design were teams of Union faculty and master secondary school teachers; each team worked for a two-year period with an expert in pedagogy in its field. The teams would eventually design and teach the Curriculum and Methods courses and play key roles in all aspects of the program.

Among the program's innovative features were a full-year teaching internship using a team-teaching model of student interns with master secondary teachers; a strong link between theory and practice; content-specific methodology; extensive use of journal writing, retreats, and other mechanisms designed to develop reflective practitioners; activities to promote strong cohort groups, peer coaching, and peer and program support (including a special Outward-Bound Program); a special modern language program which included teaching abroad; and a programmatic emphasis on alternative models of teaching and the teacher as a change agent.

New York State approved the undergraduate programs in September 1988 and the Master of Arts in Teaching (MAT) and combined-degree programs in January 1989. Certification areas included English, mathematics, modern and classic languages, the sciences, and social studies.

In June of 1989, the college enrolled its first class of thirty graduate MAT students and two undergraduates in the intensive eight-week summer phase of the program. As they graduated a year later, at the end of the period covered by this book, a new class of thirty-five graduate students and four undergraduates took their place and began their own intensive year of preparation as secondary school teachers.

See also: GRADUATE PROGRAMS.

—Janet McDonald

Edwards House. Built in 1949 as the KAPPA NU fraternity house, Edwards House, at 1247 Lenox Road, has been a college dormitory assigned to fraternities since 1971.

During the Second World War, Kappa Nu leased its building on Union Avenue to the government. When the members regrouped in 1947, they lived in the dormitories and prepared to build a house on campus. Because there was no longer any space for fraternities near the center, the fraternity was granted a site just north of the creek on the edge of the campus, and architect Leon M. Einhorn designed a rather plain, two-storey brick house quite different in style from existing Union fraternity houses. Construction, at a cost of about \$70,000, was begun in October 1948 and completed in September 1949; the house was dedicated October 22, 1949. Nine years later, Einhorn de-

signed a very similar house just to the north for Phi Sigma Delta, the other predominately Jewish fraternity then at Union (see HICKOK HOUSE).

Kappa Nu became PHI EPSILON PI in 1961, and disbanded in June 1970. During the next academic year, the house was operated as "1247," a club open to all. As that experiment seemed to have no future, the fraternity's alumni association, which owned the house, gave it to the College in October 1971, with the understanding that Union would establish a Kappa Nu Scholarship with a principal of \$10,000 plus the value of the furnishings.

Renaming the house for President JONATHAN EDWARDS, the College converted it to a dormitory. It has been occupied since the fall of 1977 by Theta Delta Chi.

Edwards, Jonathan (May 26, 1745–Aug. 1, 1801). Congregationalist minister, theologian, and second president of Union College.

Born in Northampton, Massachusetts, the ninth child and second son of eleven children of the illustrious theologian of the same name, Jonathan Edwards the Younger had an unusual childhood. When the boy was six, his father, dismissed from his Northampton parish, moved the family to Stockbridge, Massachusetts, where, as pastor of a small mission church, he worked among the Mohican Indians who constituted the great majority of the inhabitants. Most of Jonathan's classmates and playmates were Indians, and he became more fluent in their language than in English; even in later life he sometimes dreamed in Mohican.

Shortly before Jonathan's tenth birthday, his father, with the intention of preparing him to be a missionary, sent him to live among the Oneidas on the Susquehanna River, but instability caused by the French and Indian War forced the boy to return after five months.

Two years later, Edwards senior was chosen as the third president of the College of New Jersey (the future Princeton University). He died only three months after moving the family there in January 1858, and his widow died seven months later. With the help of family friends, the orphaned Jonathan entered the college at sixteen; his close college friends included DIRCK ROMEYN. At eighteen, following a revival, Jonathan was converted by the Rev. Samuel Finley and made a formal declaration of faith.

After graduation in 1765, he studied theology with the Rev. Joseph Bellamy, one of his father's chief disciples. Licensed to preach by the Association of Litchfield County, Connecticut in 1766, he began preaching as a candidate, but Princeton recalled him as a tutor of Language and Logic (1767–69). Declining the offer of a professorship, he then accepted a call to

the pastorate of the White Haven Congregationalist Church in New Haven.

It was a long but troubled tenure; the church had returned in 1760 to the practice called the Half-Way Covenant, which permitted baptism of infants whose parents were not in full communion. Edwards, opposed to the Half-Way Covenant, apparently made its abrogation a condition of accepting the congregation's pulpit; many parishioners, however, were never reconciled to that concession.

Edwards's mode of preaching exacerbated the problem; his sermons, often long discourses on theology, went over the heads of most of the congregation. A slender man of average height, dark of hair and complexion, with sharp, bold features and piercing eyes, he seldom looked at his audience, and he spoke rapidly in a nasal twang. Nor did his personality compensate for his deficiencies as a preacher: he lacked social graces, wit and small talk, and he struggled to subdue an irritable temper. Distant in manner and disposed to do only the necessary minimum of pastoral visiting, he seems to have practiced the advice he later gave a young minister: In Christian discipline, "you must set your face like a flint." Eight months after Edwards's arrival, some parishioners broke away to start a new church. Yet he endured, remaining pastor for twenty-six years.

In becoming a minister, Edwards was following his father, paternal grandfather, and four or five generations on his mother's side, but it is hard not to conclude that he should have broken with tradition and pursued an academic career. By the time he was twelve, he had read and reread Locke's *Essay on human understanding* with "constantly increasing delight," and throughout his life he was preoccupied with difficult problems in metaphysics and the philosophy of mind, almost to the exclusion of all else.

In those times, however, rigorous scholarship in a clergyman counted for a great deal, and between April 1781 and December 1794, Edwards filled the Yale College pulpit at least twenty-five times. He trained many future ministers, including ELIPHALET NOTT's brother Samuel, and he regularly assisted at Yale's public examinations, where he became legendary for strictness. Princeton awarded him a Doctor of Divinity degree in 1783, but when Yale's professorship of Divinity became vacant, he was passed over.

In his theological writings he was above all his father's disciple and defender, and he became a prominent exponent of the neo-Calvinistic movement known as "the New Divinity." His chief original contribution was the first full modern statement of the "governmental" theory of the atonement.

During his New Haven years, Edwards prepared for publication four volumes from his father's unpublished papers: *Sermons* (1780), *Practical sermons* (1788), *Miscellaneous observations on important theo-*

logical subjects (1793) and *Remarks on important theological controversies* (1794). He also published the first edition of his own *Observations on the language of the Muhhekanew Indians* (1788) and *The salvation of all men strictly examined* (1790), a monograph critical of the doctrines of Dr. Charles Chauncy. Numerous sermons and articles by Edwards the Younger appeared in the *Theological Magazine*.

Soon after arriving in New Haven, Edwards married Sarah Porter in 1770; three of their four children survived him. Sarah was drowned in an accident in 1782, and the next year he married Mercy Sabin, who also survived him.

Edwards did not hold himself aloof from the public issues of his time. He preached in support of the American Revolution, and when, in the aftermath of the Battle of Lexington and Concord, a local militia company under the leadership of Benedict Arnold decided to defy the town meeting and march to Boston, Edwards blessed them; other clergymen, deferring to Loyalist sentiment in their congregations, remained aloof. He later lost a good deal of his property during the British raid on New Haven.

A passionate abolitionist, he wrote newspaper articles critical of slavery as early as 1773. A 1791 sermon, published as *The injustice and impolicy of the slave trade, and of the slavery of the Africans*, was reprinted four times, lastly in 1834. "Great Britain in her late attempt to enslave America," he wrote, "committed a very small crime indeed in comparison with the crime of those who enslave the Africans." That issue, at least, could undermine his flinty mien: when he later came to Schenectady as president of Union, he wept to see the unequal treatment of black and white parishioners taking communion at the Dutch Reformed Church.

Membership in the New Haven church slowly declined during Edwards's pastorate; finally, in 1795, the church requested his dismission. The reason, President Stiles of Yale stated: "His Mode of Preaching & Rigidity in Church Discipline especially as to Terms of Communion & Baptisms, & his refusing to commune with the other two Congregational Churches in Town, with which that Church wish for free & open Communion." As soon as Edwards departed, the church reunited with the breakaway faction.

As his father had done after losing the Northampton church for similar reasons, Edwards then took a small mission church in a remote community for a couple of years before accepting the offer of a college presidency. While pastor of the Congregationalist church at North Colebrook, Connecticut, he completed *A dissertation concerning liberty and necessity* (1797), a defense of his father's position against the criticisms of Dr. Samuel West and others.

Seeking to replace its first president, JOHN BLAIR SMITH, Union College in 1799 offered the position successively to PETER WILSON and William Linn, who

both declined, and then, in a May 1 vote that was not unanimous, to Edwards, who accepted.

Edwards had passed through Schenectady as a child en route to the Susquehanna in 1755, but there is no record that he had ever seen Union College before being offered its presidency. There had been several points of contact, however: his elder brother, the Rev. Timothy Edwards, had been named in 1780 by Governor Clinton as a prospective member of the Board of Trustees of the proposed college; also, Jonathan seems to have known trustee Eliphalet Nott very well, and he had been a close friend of trustee Dirck Romeyn when they were Princeton undergraduates. Finally, Edwards' nephew, Yale president Timothy Dwight, had visited Union the previous year and noted the progress on Stone College.

The old SCHENECTADY ACADEMY building, which still housed the College, was illuminated the night of Edwards' arrival in late July 1799. The four-year-old institution had a faculty of only two men—ANDREW YATES and JOHN TAYLOR. CORNELIUS VAN DEN HEUVEL had died in April, and his replacement, BENJAMIN ALLEN, would not be hired for over a year. The institution's greatest need was funds to complete Stone College (see WEST COLLEGE (OLD)).

Edwards successfully lobbied the state legislature for contributions, but they were insufficient to complete the building. Internally, he concerned himself with the moral and intellectual life of students. Under his leadership, the faculty extended required attendance at morning and evening prayers from weekdays only to a full seven days, and added Saturday morning classes to the schedule. (To spend all of Saturday "in relaxation from business" was deemed "an unnecessary waste of time" by the Edwards administration.) In response to a trustees' resolution passed a few months before Edwards's arrival, the new president added to the curriculum a weekly class in English that focused on writing and public speaking. In the spring of 1800, presumably on Edwards's recommendation, the rules against playing billiards or gambling were strengthened, and keeping wine or spirituous liquors in rooms was forbidden. To permit more thorough examinations, the spring examination period was extended from three days to four.

Although Edwards tightened discipline, he was apparently less severe than those who knew him expected, and one alumnus later recollected another side of the man: according to Thomas Palmer '03, the president sometimes laughed so immoderately in his philosophy classroom that he was obliged to dismiss the class.

Edwards faced one serious crisis during his short tenure: in the wake of several discipline cases, students presented two petitions to the September 1800 trustees' meeting. One, signed by a majority of the student body, called for the removal of Professor Andrew

Yates, charging him with "being partial," "assuming too much authority," and showing "a want of general knowledge." The other petition, from the junior class, asked the trustees to fire Benjamin Allen, whom they regarded as an incompetent teacher. When the trustees rejected the petitions and rebuked the petitioners, the situation became quite volatile; some students quit and enough others threatened to do so that the future of the College was thought by some observers to lie in the balance. Edwards succeeded in calming the students, however, and the crisis passed.

Edwards's time at Union was perhaps more consequential for his church than for the College. Raised a Congregationalist, he had spent his formative years in Princeton among Presbyterians. Although he then pursued a career as a Congregationalist clergyman in Connecticut, it is the judgment of church historian Robert Ferm that Edwards, "perhaps more than any other New England figure, devoted himself to rapprochement between the two main branches of the American Reformed tradition."

At Union, Edwards was again among Presbyterians. Sent by the General Assembly of the Presbyterian Church as a delegate to the 1800 General Association of Connecticut, he advocated closer cooperation between the two churches and chaired a joint committee to settle a working arrangement for church-building on the expanding western frontier. Edwards, who had started Congregationalist churches in the western New York towns of Clinton, New Hartford and Paris in 1791, had a major responsibility for the precise formulation of the "Plan of Union" of 1801, which effectively ceded the territory west of New England to the Presbyterians. Although John Blair Smith and Eliphalet Nott were also advocates of this plan, their role in bringing it about was apparently less important than Nott's writings suggest.

The parallels between the lives of Edwards and his famous father have interested "Believe it or Not" Ripley and others of like mind, not least because both father and son began their final year by preaching on *Jeremiah 28:16*: "This year thou shalt die." On the second anniversary of his arrival at Union, President Edwards fell ill of an "intermitting fever of the regular type"; he died a few days later, and is buried in the cemetery of Schenectady's First Presbyterian Church.

Electrical Engineering Department. The electrical industry and the electrical engineering profession could both be said to have originated in the 1876 Centennial Exposition at Philadelphia, where Alexander Graham Bell demonstrated his telephone, Zenobe Gramme his electric dynamo, and Thomas Edison his quadruplex telegraph. In a sense, electrical engineering at Union also stemmed from that event.

Inspired by the exposition, Philadelphia teachers Elihu Thomson and Edwin J. Houston founded an

electrical manufacturing company in 1883 which later merged with Schenectady's Edison General Electric Co. In 1893 CHARLES PROTEUS STEINMETZ and ERNST JULIUS BERG moved from the firm's Lynn, Massachusetts, plant to Schenectady. Between them they would run Union's Electrical Engineering Department for thirty-eight years.

Curricula in electrical engineering can be traced back to 1882 when MIT's physics department offered an alternative course for students wishing to enter any of the branches of electrical engineering. The University of Missouri formed the first electrical engineering department in 1886.

When ANDREW VAN VRANKEN RAYMOND took office as Union's president in May 1894, the College was in very weak condition, with enrollments, morale, reputation and financial prospects all lower than they had been in the mid-nineteenth century. Looking for a program to lead Union's recovery, Raymond quickly concluded that the proximity of General Electric, the increasing national need for electrical engineers, and Union's tradition of engineering made that field a good choice. The College announced in 1894 an electrical engineering option to the civil engineering program. Since all the electrical engineering courses would fall in the senior year, no new faculty was needed until 1897, when Dr. Byron B. Brackett was hired as Union's first instructor in electrical engineering. He was assisted by twelve occasional lecturers from General Electric, including Steinmetz. The first seven students graduated in 1898 (the regular civil engineering course graduated only two students that year).

Horace T. Eddy replaced Brackett as Instructor in Electrical Engineering in 1898 and advanced to assistant professor in 1901. When he left in 1902, Clarence J. Coley and R. Neil Williams were hired as instructors.

Ten students had graduated in 1899, but enrollments then fell off, and the next five years produced from two to four graduates each. If the program was to play the role in Union's fortunes that Raymond had hoped, dramatic changes were necessary. In January 1901 the Board of Trustees appointed a committee to "secure legislation looking to the establishment of a State Electrical Laboratory at the College." An act introduced in the legislature the following month would have appropriated \$150,000 for a building and \$25,000 a year for salaries and other expenses. The College would have committed itself to providing full four-year scholarships to twenty-five students in each entering class, distributed by legislative district. The legislature held hearings later that year (with RPI registering its opposition), but although the proposal was still alive in 1903, it ultimately came to nothing.

R. Neil Williams, a GE engineer educated in Germany, wrote to Raymond in August 1902, shortly after his appointment to the Union faculty, pressing the president to reorganize the existing "superficial"

electrical engineering course. At the same time he transmitted an offer from Steinmetz to give, at no charge, a weekly lecture on "Modern Theory of Alternating Currents" to the senior class, provided the course were reorganized and the senior class numbered at least ten students.

Steinmetz had by then achieved international fame for his work on hysteresis and alternating-current circuits. Harvard University awarded him an honorary masters degree in June 1902, and he was increasingly interested in education. In the fall of that year, he accepted President Raymond's invitation to head a separate electrical engineering department at Union. To regularize his status as Professor of Electrical Engineering, Union awarded him an honorary PhD in June 1903, and Steinmetz took charge that fall. General Electric continued to pay his full salary, and Steinmetz continued to spend much of his time on GE work, with Williams and later Elmer Creighton handling much of the routine of the chairmanship. Steinmetz' service to Union is described in more detail in the article under his name.

General Electric also contributed money and equipment for laboratories. The department was housed in North Colonnade until the company underwrote construction of an electrical engineering laboratory building in 1905-7 (see BIOLOGY BUILDING). GE made no curricular demands on the undergraduate program, but it did expect the College to offer a master's degree program for its employees. The first master's degrees were awarded in 1905.

Until 1902/03, all the courses specific to electrical engineering in the undergraduate program were given in the senior year: d-c machines, a-c circuits and machinery, transmission lines, and electric railways and lighting. There were no separate courses on the telephone or telegraph, though these subjects may have been included in "Modern Theory of Electrical Engineering," added in 1902/03.

Steinmetz was assisted each year by three other faculty members. He headed the department until 1913, lectured occasionally for a few additional years, and lent the College the prestige of his name by remaining nominally on the faculty, as Professor of Electro-Physics, until his death in 1923.

He was succeeded as chairman by Ernst J. Berg, who had spent the preceding four years chairing the University of Illinois electrical engineering department. GE covered more than half of Berg's Union salary, in return for which he served as a Consulting Engineer to the company from 1913 to 1931. He also greatly expanded the master's program at the College and nurtured the doctoral program which had begun in 1910 but produced its first PhD in 1917. One hundred twenty-eight master's degrees and eight doctor's degrees were awarded in Berg's twenty-eight-year

tenure as department head. These were Union's first graduate programs.

Berg introduced courses in radio and telephony, and was one of two men in the country who taught Heaviside's operational calculus, the forerunner of the Laplace transform.

Notable faculty in the Steinmetz-Berg era were MORLAND KING (1906–20), who went on to head the electrical engineering department at Lafayette, Walter Lyman Upson (1912–20), who subsequently chaired the electrical engineering department at Washington University in St. Louis, JOHN NICHOLAS VROOMAN VEDDER (1914–36), FREDERICK WARREN GROVER (1920–46), and Sylvester Jacob Haefner (1925–42), who left during the Second World War to become chief civilian scientist at the Naval Underwater Sound Laboratory in New London, Connecticut.

Soon after assuming the chairmanship, Berg moved the faculty offices and classrooms to the Electrical Engineering Building, which until then had served as a laboratory only. By 1930, that building was too small, and FRANK BAILEY indirectly paid for a new one immediately to the east, which opened in 1930 (see STEINMETZ HALL).

One innovation of Berg's time harked back to the Centennial Exhibition of 1895. In 1915 the department hosted the first of what were intended to be annual Electrical Shows, featuring "electrical freaks" such as "an incandescent lamp lighted under water with no connecting wires," a four-room flat equipped with the most modern appliances, and telephone and wireless exhibits. Visitors to the exhibits in the labs and the basement of Washburn Hall included "many high school students and scientific men from this part of the state." The First World War prevented another show until 1919, and the 1920 event was the last.

In the early years, the department attracted nearly all the foreign students attending Union, 122 of them in the period 1910–25.

When Berg retired in 1941, Grover served for a year as chairman before his own retirement, and Harold Whitney Bibber, a professor at Ohio State University who had earlier worked for GE, was then appointed head of the department and chairman of the engineering division. Because Bibber's specialty was in machinery, the curriculum did not change much until after the Second World War. Heaviside's operational calculus had disappeared from the curriculum with Berg's retirement (a similar course using the Laplace transform appeared in 1957).

Although radio had been around for over thirty years, and television for fifteen, no electronics courses appeared in the curriculum until 1946. Courses in electromagnetic engineering were taught by part-time lecturers from General Electric, notably Simon Ramo (1942–45) and John R. Whinnery (1945–46). Ramo went on to found the Ramo-Wooldridge Company

(later TRW). Whinnery subsequently became dean of engineering at the University of California at Berkeley. Thomas Ripton Hoffman '45 introduced electronics courses as such, teaching them in the period 1946–50, and later in 1954–79. Bibber hired WALTER WALLACE LEWIS (1946–52, 1955/56), a world authority on the effects of lightning on transmission lines, who had just retired from GE. In 1947 Bibber convinced a former graduate student of his at Ohio State, Clarence Francis Goodheart, to join the faculty. Richard Baldwin Russ (1941–42, 1948–83), who had been on loan for one year from General Electric during the war, rejoined the faculty in 1948.

Goodheart (1947–81) succeeded Bibber as department chairman in 1955. He hired Edward Joseph Craig '45 (1956–92) in 1956.

In 1959 Hoffman introduced the first course in digital computers; it emphasized logic design and machine and assembly language programming. He convinced the Board of Trustees to rent an IBM 1620 digital computer which was installed in December 1962. The computer science program grew rapidly from then on, helped by Charles Alton Plesums '65 (1965–69), who followed Hoffman as director of the COMPUTER CENTER, and by THEODORE GEORGE SCHWARZ MS '59 (1965–87), who succeeded Plesums.

As far as this writer can ascertain, the department's dealings with the College administration from its beginnings until 1964 had been good. There is some indication that, in the last few years of Berg's tenure, he was not on good terms with President Dixon Ryan Fox, but the nature of their disagreement is unknown. More serious problems with the administration began when President CARTER DAVIDSON announced his retirement in 1964 and Theodore Lockwood came on the scene as Provost, with the understanding that the Board of Trustees expected to see major curricular reforms and a new calendar. The resulting changes, in this writer's view, almost destroyed the engineering programs. If it had not been for the 1985 review by the Accreditation Board for Engineering and Technology (ABET), our programs would not have survived.

During the five-month interregnum between Davidson's departure and President Martin's arrival, Provost Lockwood persuaded a sometimes reluctant faculty to change its calendar to a trimester model and to reduce the courses required for graduation from forty to thirty-six, while introducing a "Comprehensive Education" curriculum. Moreover, credit hours were abandoned; courses which required students to spend long periods in laboratories received the same credit as those taught entirely in the classroom.

As a result of the ten percent cutback in courses, the electrical engineering curriculum lost two courses in mathematics, two in physics, the courses in electromagnetics, economics, heat engines, strength of materials, graphics, and high frequency electronics. Added

were three free electives and three general education electives. Although the engineering faculty urged their advisees to elect, as part of their free electives, some of the courses that had been dropped, this advice was often ignored.

After Lockwood left in 1968, the engineering faculty began working to restore the engineering curricula, but progress was very slow until the 1982 visit of the ABET accreditation team.

Hoffman succeeded Goodheart as chairman in 1965, but the politics of the time led him to hate the job. James D. Palmer, appointed Dean of Science and Engineering in 1966, set out, in accordance with the policies of the Martin administration, to increase the emphasis on research in the engineering departments—in the view of some observers, to give it greater importance than teaching. This was too much for Hoffman, who resigned as chairman in 1967. He was succeeded by Russ.

In 1970, during Russ's tenure, an attempt was made to establish an electrical engineering program in Poughkeepsie, New York. I.B.M. wanted an electrical engineering program in the mid-Hudson area, just as GE had wanted one in Schenectady seventy-five years earlier. The plan, spearheaded at Union by Dean Palmer, was that Union and RPI faculty would start the program, which would be taken over by Vassar College in five or six years. As it turned out, neither RPI nor Vassar ever taught in the program. Although Vassar provided some classrooms, many classes and laboratories were held at Marist College and Dutchess Community College. Initially, in the aftermath of the 1970 invasion of Cambodia, student protestors at Vassar equated engineering to the machinery of war; in the long run a lack of computer and laboratory facilities resulted in the program's disbanding in 1976.

As a result of our impending responsibilities in Poughkeepsie, however, five faculty were hired in 1970: Lawrence D. Cutter, who oversaw the Poughkeepsie program; Jagdish Trikamji Gajjar; Thomas Anthony Galantowicz; George Harry Williams, who was hired to establish a computer science major; and Ernest George Zavisca. Palmer left in 1971 to assume the presidency of Metropolitan State College in Denver, Colorado. Zavisca left in 1972, Cutter in 1974, and Galantowicz in 1980. Craig succeeded Russ as chairman in 1973.

After Palmer's departure, and as a result of the decimation of the curriculum in 1967, the engineering faculty agitated for a dean of engineering. The Accreditation Board supported this request, and in 1974 Craig was appointed Associate Dean of Faculty while Goodheart was reappointed department chairman. At the same time the name of the department changed to the Department of Electrical Engineering and Computer Science.

The appointment of Craig as Associate Dean of Faculty was an attempt on the part of the administration to create a dean of engineering without calling him that. It was feared that appointing a dean of engineering would overemphasize the engineering programs, which enrolled less than one quarter of the student body. But Craig was given no budget to control, no part in the recruitment of faculty, and no control over the curricula. He resigned the post two years later.

Craig followed Goodheart as chairman in 1977. In 1981 it became obvious that the curricular directions of the electrical engineering and computer science programs were diverging, and the chairmanship was replaced by two co-chairs. Craig remained co-chair of Electrical Engineering and Williams was appointed the first co-chair of COMPUTER SCIENCE, the subsequent history of which is described in a separate article.

The ABET team's visit in 1982 made it clear to the administration that the future of Union's engineering programs might be short unless a dean of engineering were appointed. This team's report was received in July 1983, and the Board of Trustees approved the appointment of a dean of engineering during the next academic year. Craig was appointed to the position in March 1984.

Since the accreditation team reviewed only the programs of the most recent graduates, there was no time to make the extensive changes in curriculum needed before they arrived in 1985. The programs were adjudged deficient by the visiting team that year with an admonition to correct deficiencies *post haste*. The curriculum was then thoroughly revised to the complete satisfaction of the accrediting team on their 1988 visit. It had taken twenty years to undo the damage that the 1964/65 "reforms" had done.

Yu Chang followed Craig as co-chair of Electrical Engineering in 1983 and he in turn was followed by Michael Rudko in 1989.

The electrical engineering curriculum at the time of this writing continues to cover the basics in circuits and electromagnetics, but it has a heavy emphasis on control and communication systems, both continuous and discrete, and on the design and use of digital computers. Power systems and machinery, the principal subjects in electrical engineering a century ago, are now offered only as upperclass electives.

See also: INGVARSSON, INGVAR.

—Edward J. Craig

Eliphalet Nott (Ship). One of a few wartime "Liberty" cargo ships named by the U.S. Maritime Commission for distinguished nineteenth-century educators, the 435 foot-long *Eliphalet Nott* was launched February 14, 1943, at South Portland, Maine, as "Hull no. 777." President DIXON RYAN FOX attended the

launching and presented a steel engraving of Eliphalet Nott to be hung in the captain's cabin.

Ellery, Edward (July 24, 1868–Jan. 19, 1961). Professor of Chemistry (1904–40); Dean of the Faculty (1919–33); Acting President (1933–34).

An Albany native, Edward Ellery earned an AB from Colgate in 1890 and taught there for one year, then spent the next thirteen years as science instructor (1891–94) and headmaster (1894–1904) at the Vermont Academy. While in the latter post, however, he took time off for graduate work in chemistry at the Universities of Berlin and Heidelberg; working under Walter Nernst, he earned a PhD from Heidelberg in 1896.

After another eight years at the Vermont Academy, Ellery accepted the professorship of chemistry at Union in 1904, replacing Richard S. Curtiss (1901–04), who had briefly succeeded the distinguished MAURICE PERKINS (1865–1901). Ellery oversaw the growth of the chemistry department from one professor and a laboratory assistant to five professors.

He spent the first half of 1909 back in Berlin doing post-graduate work and investigating the possibility of adding courses in electrochemistry and physical chemistry. Since 1857, Chemistry had shared Philosophical Hall (the present ARTS BUILDING, before additions) with Physics, but BUTTERFIELD HALL, planned in part by Ellery and opened in the fall of 1918, gave the department its own building.

Anticipating the move, in 1917 Ellery introduced—separate from the regular chemistry major—the successful but ultimately controversial BS in Chemistry program, a specialized pre-professional curriculum with little non-technical content. It was intended to prepare students for industrial positions without further graduate work. About 1920, he began to emphasize physical chemistry in the curriculum and in hiring, a decision that would eventually bring criticism from the American Chemical Society for the paucity of Union's offerings in organic chemistry.

Ellery long—and by all reports, successfully—taught the freshman general chemistry course, influencing many students to major in his field. He apparently did no research of his own, but he served as a consulting chemist to industrial concerns and undertook further postgraduate work at Cambridge University on a leave in 1926/27. His only two published papers were titled "What Colleges can do for Business" and "Training of the Chemists for Industry." A devout Baptist, he also taught, 1916–28, an optional course on the Bible.

In 1919 Ellery succeeded BENJAMIN RIPTON as dean of the faculty, a part-time position he held for the next fourteen years. It is a measure of his administrative ability that while teaching, chairing the chemistry

department and serving as dean, he was also able, from 1921 until 1940, to fill the demanding position of national secretary of SIGMA XI, the science honor society. In 1936 he compiled (with Harry Ward) *Sigma Phi, a half century record and history*. Ellery also served for many years as City Chemist of Schenectady and was a member of the New York-New Jersey Commission on Pollution in New York City.

During the illness of president FRANK PARKER DAY, Ellery gave up the deanship to serve as acting president from March 1, 1933. Ellery's friend, trustee W. Howard Wright '95, a Schenectady chemical manufacturer, was empowered to work with Ellery as the trustees' representative between regular meetings. After the board forced Day's resignation, effective August 10, 1933, Day believed that Ellery and Wright had conspired to persuade the trustees to take that action. The two men apparently believed that Day had not been doing a good job as president and that he would not sufficiently regain his health to return to office. Time would prove them correct on the second point; the first is debatable.

Ellery quietly campaigned to succeed Day permanently, but the board chose DIXON RYAN FOX as president, and Ellery's term ended July 1, 1934.

When Day was president and Ellery dean, a faculty committee chaired by professor EARL CUMMINS had undertaken a study which culminated in a proposal to revamp entirely the College's faculty structure, curriculum, and admissions policies. It fell to Ellery, as acting president after Day's resignation, to announce and promote "The Union College Plan for the Intellectual Advancement of Youth."

This program, discussed in greater detail in the article on CURRICULUM, introduced the divisional system (see DEPARTMENTS, DIVISIONS AND CENTERS), reduced the number of course offerings, and relegated most admissions requirements to the divisions.

Ellery argued forcefully for the plan, which probably embodied some of his ideas. He outlined what he presented as inevitable radical changes in the small college of the future. Admissions requirements would become more elastic. Because every student has different interests, abilities and capacities, the curriculum would be tailored to each student. Departments would disappear. There would be a new emphasis on fundamentals and specialized courses would be abandoned.

Implicitly, a new kind of teacher would be needed:

In the small college of the future the professor will not only know a great deal about his subject, but will also understand the point of view of the mind that is approaching the subject for the first time. He will be profoundly interested in the student as well as in his subject. Untold benefit to mankind at large will result when to a breaking down of fences is added a concern on the part of the professor in the cultivation of refined speech and manner, and in the development of character and personality of the student.

Credits would disappear: "In the future graduation will be determined by a grasp of a subject in relation to other subjects, an ability to apply principles to new situations."

Not surprisingly, the results fell far short of Ellery's vision. Indeed, when the curriculum was next revised, in 1946, the criticism was justly made that the "Union College Plan" had promoted the very specialization it was touted as replacing.

When Ellery left the president's office in 1934, he was sixty-five. Because CHARLES GARIS had replaced him as dean, the position of "Chairman of the Faculty" was created for Ellery, and Fox also named him chairman of the Science Division.

Ellery planned to retire at the end of 1938/39, but he acceded to an administration request to serve an additional year. As a tribute, at the conclusion of his final year he was asked to deliver the Baccalaureate sermon, a duty traditionally falling to the president.

On Ellery's retirement, Sigma Xi elected him to a two-year term as national president.

Ellery was known by students as "Pink," or sometimes, "Pink Whiskers." He married twice. His first wife died a few weeks after he came to Union in 1904; in 1909 he married Adelaide True and moved into the south faculty house (now Whitaker House) in South College, where he remained until retiring. Adelaide Ellery died in 1936.

Ellery received three honorary degrees: a DS from Colgate in 1912 and another from the University of Pittsburgh in 1931, and an LLD from George Washington University in 1937.

Ely, Esther Griffin (March 26, 1862–May 20, 1954). Registrar, 1919–1933.

Coming to Union about 1908, Esther Ely worked at an impressive array of administrative jobs before becoming REGISTRAR in 1919. She served as recorder, as Secretary to Dean RIPTON, and as the only assistant in the treasurer's office, 1909–19. Concurrently with her other duties in the treasurer's office, she started the College BOOKSTORE and operated it for its first decade. She also found time to look after Admissions when FRANK COE BARNES was in Europe.

Following the departure in 1919 of Dean Ripton and Assistant Treasurer HARTLEY F. DEWEY, Esther Ely was appointed Registrar; the title had been dormant since 1904, while its duties were filled by the dean's office. During her fourteen years as Registrar, Miss Ely also started the student and alumni employment bureau and operated it until her retirement.

A spinster, known to students as "Mother Ely," she lived in WELLS HOUSE with her friend Alice Wells from the time it was built in 1909 until Miss Wells' death in January 1930. A year before retiring in 1933, she moved to a house in the city.

Endowed Professorships. Union's first endowed chairs were the NOTT PROFESSORSHIPS established in 1854 with the support of the NOTT TRUST FUND. The number of different Nott Professorships eventually reached eight, but by the end of the century the supporting assets had been diverted to retire the College's debts and the title soon ceased to exist.

In 1896, President RAYMOND appealed to alumni to endow chairs (at \$50,000 each) in honor of professors they remembered fondly; no one responded, and, indeed, only the Hale chair, established in 1978, honors a former faculty member.

Although gifts and bequests in 1900, 1909 and 1916 established the Armstrong, Spencer and Bigelow chairs, the names were not often used at that time, and the endowments eventually produced only a small fraction of the salary attached to the professorship. Chairs came into greater prominence as the Davidson administration publicized the endowment by FRANK BAILEY '85 of professorships in 1945, 1949 and 1952.

The 1980 endowment campaign was probably the first systematic attempt to establish more endowed chairs; it aimed to create four distinguished professorships, one in each division, to be occupied on a rotating basis by a department chair. The million-dollar endowments would also fund research and other projects. Three of the four named professorships created in the 1980s were in fact attached to three divisions, but it proved impractical always to fill them with department chairpersons.

Union professors who retire in endowed chairs now generally keep the title for life, with the addition of the word "emeritus." The dates shown here are those of active service in the professorship. Delays in filling a chair have sometimes occurred because no one was eligible (only tenured faculty are appointed to most chairs), and sometimes because the endowment needed time to grow.

Armstrong (Thomas) Professor of Economics. Established July 1900.

An immigrant tailor who was admitted to the bar in 1847 and became a wealthy Plattsburg, New York, lawyer, Thomas Armstrong began his benefactions to Union College about 1890 through his friendship with trustee JUDSON LANDON '55. At his death on December 30, 1895, he left Union about \$150,000 to establish scholarships and a Professorship of Political Economy and Social Science, but the will was contested on grounds of mental incompetence by his divorced wife and by his son, Thomas Emmett Armstrong, a non-graduating member of the Class of 1871. Losing the case, the wife then unsuccessfully sued to recover her dowry from Union. The several years of court cases were watched with much apprehension by an impoverished College.

After the case had been settled by a compromise yielding Union about \$62,000, the College used its portion of the Armstrong bequest to establish scholarships for the sons of Clinton County's "practical farmers or other practical workmen" and a professorship of political economy and social science.

Part of the income was presumably used to underwrite a faculty salary in the social sciences, but the modern custom of describing someone paid in this way as the honored occupant of a chair had not yet developed at Union; the identity of the "Armstrong professors" is not a matter of record before 1946, when BENJAMIN WHITAKER was named Armstrong Professor of Economics. Because the income became inadequate to support a salary, the fund has been used partially to offset an Economics department salary, but the title has not been used since Whitaker's retirement in 1965.

Bailey (Frank) Professorship of Classics. Established November 14, 1945.

Treasurer Frank Bailey '85 endowed the first of three Bailey professorships with a \$150,000 gift in 1945. Officially the Chair of Greek, Latin and Ancient Languages, it is now usually called the Chair of Classics.

1946–60 HARRISON COFFIN
1974–81 DAVID REECE
1986– Christina Sorum

Bailey (Frank and Marie Louise) Professorship of Physics. Established January 11, 1949, by Frank and Marie Louise Bailey.

Early in 1949, treasurer Frank Bailey '85 decided that his undesignated gifts to the College over the past several years, amounting to \$150,000, should be used to endow a second professorship, this one in physics. He also specified the chair's first occupant.

1949–56 VLADIMIR ROJANSKY
1959–66 Harold E. Way
1975–79 WINFRED M. SCHWARZ and
Charles D. Swartz
1987– David Peak and Kenneth L. Schick

Bailey (Marie Louise) Chair of Mathematics. Established January 31, 1952, with a gift of \$150,000 from Mr. and Mrs. Frank Bailey.

1952–58 DAVID S. MORSE
1958–64 ORIN FARRELL
1964–68 AUGUSTUS FOX
1971–91 William Stone

Baker (May I.C.) Professorship in Arts. Established December 5, 1979, through a deferred bequest of WALTER C. BAKER '15, in memory of his first wife, "to establish a professorship in Fine Arts." The Board of Trustees then substantially augmented the Baker endowment with general endowment funds.

1981–92 Daniel Robbins

Bigelow (John) Professorship of History. Established January 5, 1916.

Following the death in 1911 of John Bigelow '35, several of his friends and associates, including such luminaries as Oswald Garrison Villard, Joseph Choate, Charles Evans Hughes, J.P. Morgan, Andrew Carnegie and Elihu Root, joined to raise money for a memorial, envisioned as a building at Union College and a professorship of history and political science. When it became evident that the money raised could accomplish only the second purpose, the proposed building plan was abandoned in 1916.

1924–32 JAMES W. BLACK
1947–61 JOSEPH DOTY
1961–66 FREDERICK L. BRONNER
1968–81 Neal W. Allen
1986–96 Manfred Jonas

Hale (Edward E. Jr.) Professorship in English. Established December 5, 1979.

At his death in 1979, Schenectady attorney Harold E. Blodgett '11 bequeathed a large sum "to the English Department in memory of [his former teacher] EDWARD E. HALE JR." Invoking the bequest's provision that "if at any time all or part of the income of this gift is no longer needed, in the judgment of the President or Board of Trustees, for this purpose, then such income may be used to support the teaching of English in such manner as they shall determine," the College used most of the bequest to endow the Edward E. Hale Jr. Chair in English.

1983–89 Hans Freund

Irving (Washington) Chair in Modern Literary and Historical Studies. Established in 1975.

Roger T. Stone '28, and his wife, Doris Zemurray Stone, endowed the Washington Irving Chair to "bring distinguished scholars in arts and letters in either a visiting or longer tenure to further teaching and scholarship at Union College in areas represented by the life of Washington Irving." After the professorship had been used to bring Gary Wills and Larzer Ziff to the campus for a term each, it was changed, with the donors' agreement, to a chair for regular faculty members.

1981–86 Manfred Jonas
1986–93 Robert Wells

Lamont (Thomas) Professorship of Ancient and Modern Literature. Established October 30, 1948.

On his death in 1948, J.P. Morgan's partner, Thomas W. Lamont, left the College a bequest to establish a chair in memory of his father, the Rev. Thomas Lamont '56. Lamont suggested a professorship "in ancient or modern languages or in any other field the college authorities might deem more important." The Board of Trustees initially chose English literature, but the chair has always been called "Ancient and Modern Literature."

1948–66 Harold Blodgett
 1967–72 Carl Niemeyer
 1978–83 William M. Murphy

Livingston (Gilbert R.) Professorship in Psychology. Established January 1977.

Announcing an unrestricted bequest from Gilbert R. Livingston '24, President BONNER reported in 1977 that the College would create a named professorship not permanently attached to any department, awarding it "to a distinguished member of the faculty in recognition of excellence and dedication in teaching and scholarship...upon recommendation from a committee of faculty members from all of the College's divisions." In 1979 the trustees designated the professorship a chair of psychology.

1982–86 C. William Huntley
 1993– Seth Greenberg

MacArthur Foundation Professorship. Established 1981.

A 1981 grant from the John D. and Catherine T. MacArthur Foundation endowed a fund to support a junior faculty member chosen by the president. Appointments were to be for a limited time.

1984–86 Faye Dudden
 1987–90 Anne Scott

Patterson (Robert Porter) Professorship. Established January 1, 1956.

A 1952 bequest from Robert Porter Patterson '12 was combined with the gift of friends to establish a chair of American government in his memory.

1973– Joseph Board

Spencer (Ichabod) Professorship of Philosophy.

In 1909, Katherine Spencer Leavitt gave the college \$75,000 in memory of her father, the Rev. Ichabod S. Spencer '22, "for the endowment of the department of philosophy." The trustees decided to devote one-third "to the founding of a lectureship in Psychology" (see SPENCER (ICHABOD) LECTURES IN PSYCHOLOGY) and the remainder to "the maintenance of the chair of Philosophy...to be known as the Ichabod Spencer Professorship in Philosophy."

No longer sufficient to underwrite a regular salary, the fund has latterly been used intermittently to pay part of the salary of a visiting or adjunct professor, who is given the title "Leavitt-Spencer Professor of Philosophy."

1911–17 FRANK S. HOFFMAN
 1940–60 HAROLD A. LARRABEE
 1982–92 Richard Taylor

Stone (Roger Thayer) Professorship of Sociology and Anthropology. Established 1989.

A series of gifts from Doris Zemurray Stone and Samuel Z. Stone, commencing in 1989, established a

professorship in memory of Roger Thayer Stone, Class of 1928. See also: Irving (Washington) Professorship in Modern Literary and Historical Studies.

1989– Martha Huggins

Watson (Thomas J. Sr.) and Emma Watson Day Professorship in Engineering. Established April 20, 1989.

Through the efforts of Union trustee Dr. Richard Day, '39, several members of the Watson family established a professorship honoring the founder of International Business Machines and his sister, Dr. Day's mother.

1989– Frank F. Milillo

Winters (Chauncey H.) Professorship in Economic Thought. Established December 5, 1979.

In 1979, the trustees announced that the Chauncey H. Winters '12 bequest "for the promotion of education and learning" would be used to endow a chair in Economics. After the period covered by this book, the fund having exceeded what was required for that purpose, it was reassigned to support two chairs: the Chauncey H. Winters Professorship of History and Social Science, and the Chauncey H. Winters Professorship of Political Science.

1986–90 Dwight Phaup

Wold (John and Jane) Professorship of Geology. Established in 1988 by John Wold '38 and his wife from an undesignated endowment given at the end of 1982.

1989– George H. Shaw

Chairs established since 1990 include:

Gould (R. Gordon) Professorship of Physics. Established 1994.

Jansen (Carl B.) Professorship in Engineering. Established 1992.

Sharpe (Kenneth B.) Professorship in Management. Established 1993.

Sherwood (Florence) Professorship of Life Sciences. Established 1994.

Sherwood (Florence) Professorship of Physical Sciences. Established 1994.

Sherwood (Florence) Professorship of History and Culture. Established 1993.

Engineering Laboratory. Anticipating the razing of the MACHINE SHOP to allow expansion of the CAMPUS CENTER, the College sited a two-storey Engineering Laboratory north of BUTTERFIELD HALL. Designed by Saratoga Associates, the structure, containing a machine shop, offices and storage space, was erected by the Barsons Construction Co. of Schenectady during 1984–85.

Engineering, Science and Management War Training Course.

Instituted by the U.S. Office of Education and conducted at the College from December 1940 until June 30, 1945, under the direction of Professor MORTIMER SAYRE, the Engineering, Science and Management War Training Course trained more than five thousand people for work in war-related industries. The evening courses—fourteen at first; later twenty or more—were not open to Union students. Similar programs existed at more than one hundred other colleges.

English Department. The direct study of English and American literature, now the focus of most English department courses, did not begin at Union until the 1840s, and it had a continuous history only from the 1860s. Writing and the theory of literary criticism, however, had some place in the curriculum from the earliest years.

In 1799 the trustees resolved:

That hereafter a special attention be paid to the English language one afternoon in each week [changed at the next meeting to "the forenoon of Saturday in each week."] by the respective classes and that the tutors prescribe exercises in orthography, reading and composition & that they use Lowth's English Grammar, Sheridan's Rhetorical grammar, and Sheridan's Dictionary, as a standard of pronunciation. Resolved also, That at the Examination for degrees a special enquiry be made into the progress of the candidates in these useful branches.

The three upper classes were required to read aloud "compositions of their own in the English language." This marked the beginning of the close association of writing with PUBLIC SPEAKING (described at greater length in the article on that subject), which would continue under various professors of rhetoric until 1930.

From the earliest years, Union's president, like many college presidents, taught a senior year course. Under ELIPHALET NOTT, president 1804–66, this course, called "Criticism," used KAMES *Elements of criticism* as a textbook. As explained in KAMES (ELIPHALET NOTT'S COURSE IN), Nott's use of Kames was *sui generis*, and "criticism" was not restricted to literary criticism, but Kames did treat, among other subjects, the aesthetic foundations of literary art.

In 1840/41, rhetoric professor ALONZO POTTER '18 taught an optional senior course in Shakespeare and Milton. "*Othello* and *Hamlet* were read in course and subjected to a critical analysis," the College reported to the Board of Regents, "and the same course was pursued with *Paradise Lost*, and with some of the minor poems and prose writings of Milton." Records are not thorough enough to reveal whether he taught the same course in other years before leaving the College in 1845.

English literature returned in 1863 with one term of senior lectures on that subject, taught by Nathaniel G. Clarke (1863–66), Nott Professor of Logic, Rhetoric and English Literature. *Paradise lost* was again a textbook from 1864. From 1865 to 1867 sophomores in both the scientific and the classical course took a term of Chaucer; thereafter, a second term of English literature was added to the senior year.

For the most part, Clarke approached English and its literature as if it were Latin or Greek, a dead language (Old English, Anglo-Saxon) with a set of ancient classics, as did (to a lesser extent) his successors, RANSOM B. WELCH '46 (1866–76) and GEORGE ALEXANDER '66 (1873–83). Under Clarke, the College catalogue noted that "In the study of English Literature, it is the aim to secure an acquaintance with the historical development of the language, and of the course of English thought as expressed at different periods, in the works of representative men." In 1877 Alexander still used the study of Chaucer to introduce students to "the rules of declension and conjugation."

Like Potter, Clarke and Welch, Alexander was a clergyman, but unlike them he had charge of a church while on the faculty. He had taken up horseback riding for his health, and students remembered him as a cheerful but strict teacher who always arrived on horseback, tethering his horse outside the registrar's office.

When Alexander resigned in 1883 to become pastor of a church in New York City, his faculty position was filled by the Rev. Giles Hawley '71, and then, following Hawley's death a year later, by the Rev. JAMES REAGLES TRUAX '76.

With the arrival of EDWARD EVERETT HALE JR. to teach rhetoric and logic in 1895, Truax became responsible only for English language and literature. The modern English Department could be said to date from that time. Like Clark and Alexander, Truax was a disciplinarian who drilled students in the "mental science" of Bain's *Rhetoric*, and put them through their paces in Sweet's *Anglo-Saxon primer* and Skeat's *Etymology*, but he also developed courses in Shakespeare, English essayists, the great orators, American literature, nineteenth-century English poetry, and the philosophy of English literature. In this last course, Truax dealt with enduring critical problems of the discipline: the relations of literature to life, form to content, the influences that determine periods, and, more curiously, "the collective mind" which underlies all great English writing and "gives it unity." Truax believed in the value of bathing the mind of American youth in the sweet streams of Englishness, as the best way to "enlarge the whole spiritual horizon," and to make a gentleman, a man who was something, rather than a man who could do something.

As part of an austerity campaign that substantially reduced the size of the faculty, the Board of Trustees

forced President ANDREW V.V. RAYMOND in 1902 to dismiss either Hale or Truax. Truax departed, ostensibly for reasons of health, at the end of 1902/3.

Hale then took over as Professor of English Literature and Rhetoric. For the next sixty-five years, only five men chaired the department. The temperament of the chairman was the spirit of the department in those years, and the longest-serving and most influential chairmen were Hale and Harold W. Blodgett.

Hale was a sort of Dr. Samuel Johnson for the instructors who served under him: they thought of odd questions to ask him as he sat in his office in Washburn Hall or his home in the South Colonnade, just to provoke him to memorable utterance. Once he told them that life is a futile attempt to keep what must be taken from us; therefore we should do our best to lose everything. "Lose everything!" became one of his mottos.

As a teacher, Hale was too cryptic for most students, but he graded easily and carried out an unambitious curriculum. Outside the classroom, however, he made a great impression on his students. In 1911, he co-founded the "English Club" (renamed the "HALE CLUB" after his death); it was devoted to conviviality and the discussion of topics ranging from Hale's map of the travels of Leatherstocking to the movies, cheap fiction, or the grace of God.

After Truax's departure, the study of rhetoric and public speaking became a separate subdivision, under Professor HORACE MCKEAN, a former Baptist minister, who took over Hale's duties as professor of rhetoric, and who was quite skillful in the tactics of competitive debating. Under McKean, the Union team won some famous victories over Cornell, Colgate, Rutgers, and Hamilton (see DEBATING). All students were then required to take a two-year sequence in rhetoric, as well as sophomore English literature courses, and in the junior and senior years they had to write two essays a term, to be marked by the English Department. The amount of grading was staggering: two hundred papers a week each for Hale and McKean, marked at one sitting, sustained only by Camel cigarettes and a large pot of coffee.

In addition to its professors, the English Department was usually staffed by three or four instructors, often recent Union graduates, who taught the freshman writing course out of Mill's *Civil liberty* and Fiske's *Athenian and American life*. Theodore Baird, an instructor in 1922, remembers them as having a great *esprit de corps*, brought together by admiration of Hale. Those who did well sometimes left for further graduate work, often at Cornell or Columbia, and then returned to become regular faculty. For instance, Truax, Codman Hislop '31 DANIEL WEEKS '28, and MAX WAINGER left as Union instructors and returned as assistant professors. Later, Union graduates Alan Nelson '47 and Vincent DeBaun '47 joined the English de-

partment after earning graduate degrees. Besides employing its own graduates, the College often favored candidates with Harvard PhDs (Hislop, William M. Murphy, and Carl Niemeyer, in English). Murphy recalls being summoned from his study carrel at Widener library to meet with Union's President Davidson, who, faced with the need to recruit a large addition to the faculty immediately after the Second World War, came to Harvard in person for that purpose.

Hale had tended to hire men whose interests, like his own, extended beyond the classroom. RAYMOND HERRICK (1924-56) regularly taught nineteenth-century literary history, but he was, on the side, a passionate follower of Ibsen and Shaw. His writing class started the IDOL in 1928, and he was a co-founder of the Schenectady Civic Players. In his short black coat with a moleskin collar, he gave stirring lectures about how his amateur public theater would, along with the church, do something to instill in the now destructive rational egotists of America some sense of the possible harmonies of communal life.

Other faculty had other preoccupations: Weeks edited the alumni magazine (1939-42), Hislop published histories of Albany (1936) and of the Mohawk River (1948), and eventually a monumental biography of Eliphalet Nott (1971); Professor JAMES SPROAT GREEN developed in 1927 Union's first course in art history (using "lantern slides" provided by the Carnegie Corporation); and Wainger, the Americanist, served as director of the New York State Federal Writers' Project, which produced *New York: a guide to the empire state* (1940). He later published high school textbooks on New York State history and on American history.

In failing health, the sixty-nine-year-old Hale was forced to step down as chairman in 1932. Herrick succeeded him, but proved an unsatisfactory administrator; to replace him in 1935 President Fox made the first of two bold outside appointments to the English department chairmanship. He chose BURGESS JOHNSON, a fifty-seven-year-old Syracuse University journalism professor who had enjoyed a colorful career in the magazine world and in publishing, and was known as the author of several books of humorous verse, as well as bittersweet essays on teaching. Fox hoped that Johnson, whose age would limit his stay at Union, would have a short-term salutary effect on what had become a rather parochial department. One of Johnson's reforms was the introduction of modern literature into the Freshman English course. When Johnson retired in 1944, Fox tried to broaden the department's horizons academically by persuading JAMES M. CLINE, a 1920 graduate of the College who had served as an instructor under Hale, and had since become English department chairman at the University of California at Berkeley, to return to Union. This initiative proved less

successful; Cline went back to Berkeley after a year. Harold W. Blodgett, who had joined the faculty in 1936 from Keuka College, then became chairman.

Two other fields originated within the English Department, in part because Union was late in developing a Department of the Arts. After Green's resignation in 1939, instruction in art history (see ART) was offered only sporadically until the 1951 appointment of JOHN BRADBURY to the English Department. His graduate study had been in both art history and literary criticism, and for several years he labored to increase the role of art at Union. With the gradual building of an art faculty, after 1957 Bradbury taught only English Department courses and Humanities 1, a course with substantial art history content. Following Bradbury's death in 1969, the English Department's Hans Freund continued to teach the course, increasing the art history content.

THEATRE—coaching drama and later teaching related courses—remained a responsibility of the English Department from Herrick's time until creation of the Arts Department in 1967. EDWARD CARROLL, Gifford Wingate, and William Meriwether were the principal instructors during that period.

Public speaking, in decline as an academic field, was discontinued in 1929/30, a few years after McKean's death, but practice in writing had also been a part of Freshman English since 1911/12. Latin professor GEORGE DWIGHT KELLOGG offered a non-credit course in public speaking, 1935–43, and after the Second World War the subject returned to the English curriculum from 1947 to 1966, usually taught by the professor of theatre.

Until recent decades, Union's English department produced scant literary scholarship. Hale was a well-known scholar-critic, a regular contributor to the *Atlantic monthly*, who published a great many anthologies and school editions of literary classics, as well as fine biographies of William H. Seward (1910) and of his father, Edward Everett Hale Sr. (1917).

Burges Johnson's many books, discussed in the article on him, were literary but (with the possible exception of *The lost art of profanity*, published in his retirement), not scholarly, while most of Codman Hislop's books, though scholarly, did not concern literature. Forty-one years would pass between Hale's last book and John Bradbury's study of the Southern Agrarian literary movement, *The fugitives, a critical account* (1958). Five years later, Bradbury brought out *Renaissance in the South*, an account of Southern literature after the Second World War.

Harold W. Blodgett, who had published *Walt Whitman in England* (1934) and a biography of Samson Occom (1935) before joining the faculty, and later issued several textbooks, co-edited the "Comprehensive Reader's Edition" of *Leaves of grass* in the year of his

retirement (1965) and the three-volume variorum edition, the work of a lifetime, fifteen years later.

William M. Murphy's distinguished life of the artist John Butler Yeats, *Prodigal father*, appeared in 1978. A few years later there was an obvious change in the department's productivity: Frank Gado's authoritative *The passion of Ingmar Bergman* came out in 1986, followed rapidly by four translations by Peter Heinegg, books on Conrad Aiken and Denise Levertov by Harry Marten, Samson Ullmann's edition of the Yale manuscript of Matthew Arnold, a biography of Janet Flanner by Brenda Wineapple, an Abbey Theater history by Adrian Frazier, two collections of poetry by Jordan Smith, and a study of Henry James's *Italian hours* by Bonney MacDonald, all published before 1991.

This is one mark of the difference between the era of Harold Blodgett and the immediately following period, when, under the HAROLD MARTIN administration, Union raised its scholarly expectations in the hiring and tenuring of faculty in all disciplines.

Blodgett was a well-liked chairman, a kind and thoughtful gentleman of high standing as a scholar. During his period, there was little change in the curriculum; each professor had his area, and the students made their own way through a small set of standard courses, from Freshman English, through sophomore survey and junior period courses. In 1959 the English Department became the first in the College to require a comprehensive Major Field Examination for graduation, and near the end of Blodgett's term it also began to require a senior thesis for honors.

Blodgett stepped down as chairman effective February 1963, two years before his retirement. Under the chairmanship (1963–68) of Carl Niemeyer, course offerings, especially in American and modern literature, were elaborated, and with the new variety, the requirements for the major were strengthened. Some of these changes were necessitated by the introduction, in the fall of 1966, of a new calendar (tri-mester instead of semester) and a new "Comprehensive Education" CURRICULUM—reforms which, beginning in 1965, spurred an overhaul of courses across the College.

In general, the course requirements for an English major remained at the end of the period covered by this book what they became in 1966—though without the Major Field Examination, dropped in 1972, when some faculty quailed at the thought of further early June bloodlettings.

It may seem odd today that American Literature did not develop earlier as an extended field, since both Hale and Blodgett were nationally recognized scholars of the subject. But the American literature course established in the 1890s by Professor Truax sufficed, with very few changes, until the curricular revisions of the later 1960s. By the early 1970s, the department

had subdivided American literature by genre and period, introductory and advanced courses—nine in total—in parallel with English literature. In the meantime, Wainger and Hislop had received a grant in 1946 to develop an American Civilization course required for senior engineering majors. Focusing on “the democratic spirit in literature, with emphasis on the great documents of democratic faith,” it continued to be offered until 1966/67.

By the time Niemeyer’s five-year term as chairman was up, in 1968, the department had entered a long period of internal strife, and in response to the urging of several members of the department, the administration decided not to reappoint him. Concluding, as Fox had earlier, that an outside appointment was required, President HAROLD MARTIN chose Michael Shinagel, then on the Cornell faculty. Shinagel (another Harvard PhD) had formerly taught under Martin in Harvard’s General Education program.

The curriculum continued to expand rapidly, with elective courses in film (Frank Gado), black literature (Shinagel), and the Indian in American literature (David Stineback); the Major Field exam was dropped and requirements were relaxed.

At the end of Shinagel’s five years as chairman, PATRICK KILBURN assumed the post in 1973, but he died less than a year later. His successor, Frank Gado, also served for less than a year, resigning the chairmanship in December 1974 in a dispute with the administration over the handling of a faculty review recommendation. At about the same time, two junior faculty members were denied tenure despite departmental recommendation. Concluding that no member of the deeply divided department would be sufficiently acceptable to the others as chairman, Dean Martin Lichterman assumed the chairmanship for the balance of the year.

The following year, Ruth Stevenson, a Shakespearean who had been on leave, and who was still untenured, returned as the first woman department chair at Union. Under her, animosities gradually diminished and three new long-term faculty were brought in (Heinegg, Marten, and Wineapple). The College had by then moved to a rotating chairmanship; formal, democratic procedures for hiring; a College-wide system for reappointment; and a merit-system for faculty evaluation. As a result, the era since the 1970s can no longer be described in terms of the temperament of the department’s gentleman chairman and a staff of teachers with avocations or lifelong book-projects.

Perhaps the department has had no distinguished teacher so much remembered as Edward Everett Hale, in whose memory a grateful student, Schenectady lawyer Harold E. Blodgett ’11 (unrelated to Professor Harold W. Blodgett), bequeathed a large sum of money used to endow the Hale Chair of English

(1979). But in the 1930s and ’40s, Raymond Herrick, the Shavian of Schenectady, trembling with purpose, made a strong impression on his students. In the 1950s, William Murphy, with his talent for apt quotation and memorable anecdote, and Carl Niemeyer, a quite perfect reader of poetry, were the great lecturers. In the 1960s and ’70s, the highly articulate Frank Gado and Hans Freund were reckoned among the best teachers in the College: Freund, a former Viennese actor under Max Reinhardt, attracted classes of three hundred to Old Chapel for his Humanities course. In the 1980s, Peter Heinegg succeeded Freund as one of Union’s star performers, while Stevenson, Wineapple, Marten, and James McCord built the department’s current reputation for vigorous discussion and educational experiment.

During the period covered by this book, English faculty have occupied two endowed chairs. Hans Freund (1983–89) held the Edward Everett Hale Jr. Chair, and Harold Blodgett (1948–66), Carl Niemeyer (1967–72) and William M. Murphy (1978–83) the Lamont Chair of Ancient and Modern Languages.

Except for Hale and Burges Johnson, whose offices were in Washburn Hall, the English Department was quartered in BAILEY HALL from that building’s opening in 1927, and in the HUMANITIES BUILDING from 1967.

See also: HENRY COPPEE; WENDELL LAMOROUX; JOHN NOTT; and THOMAS KING WHIPPLE.

—Adrian Frazier

Enrollment. As the first college in upstate New York, Union had no local competition, and to the extent that it did not limit itself to students destined for “the learned professions,” it cast a wider net, in its earliest years, than did traditional institutions. These circumstances may have disposed the College from the outset to become relatively large, but much of its actual growth was a direct consequence of president ELIPHALET NOTT’s educational philosophy and ambitions (all of the older colleges increased substantially in size during the first half of the nineteenth century, but apparently none grew by as large a percentage as Union).

Soon after taking office in 1804, Nott began to plan for the larger and more secluded campus on the hill to which the College moved in 1814. The policies he sustained or inaugurated—flexible entrance requirements, low TUITION, liberal provisions for “indigent students,” and a willingness to admit young men expelled from other colleges (if they had not “rebelled against authority”)—contributed to steadily rising enrollment. The fame of Nott’s own senior year course eventually brought Union many transfer students.

Within a few years of the move to the present campus, Union was one of the largest colleges in the coun-

try (though never the largest in total enrollment). When students overflowed the campus dormitories, the College repurchased its former downtown building, naming it West College (see WEST COLLEGE (OLD)), and housed freshmen there.

It is difficult to give exact statistics for the size of Union's nineteenth-century student body. No enrollment figures exist for the years before 1805 (the numbers of graduates and non-graduates in each class are known, but those totals may not have borne the same relation to annual enrollment in the early years that they did later). Beginning in 1805, statistics can be obtained from several sources: catalogues listing members of each class were first published in that year, and for a large part of the nineteenth century they usually appeared in the fall term and the spring term (but not the winter term). In 1885, Franklin B. Hough published *Historical and statistical record of the University of the State of New York*, which included Union's enrollment statistics for 1819–24 and 1834–83. From 1836 onward, the College filed a report with the Board of Regents giving enrollments at the end of each academic year.

These sources seldom agree. Thus, for example, the three sources present these figures for three representative years:

1836

288 Hough
281 Regents report
265 fall 1835 catalogue
342 spring 1836 catalogue

1850

266 Hough
220 Regents report
295 fall 1849 catalogue
227 spring 1850 catalogue

1874

160 Hough
144 Regents
98 fall 1873 catalogue
93 spring 1874 catalogue

Part of the explanation for the differences may be that the counts were made at different times of the year; the size of the student body changed constantly as students arrived and departed between and during terms. It may also be that part-time students were sometimes counted and sometimes ignored. But not only is the range between the highest and lowest reported number surprisingly large, the sources are also not in a constant relation to each other. The most conservative (because taken at the end of the year) and the most carefully determined figure ought to be that reported to the Regents, but unfortunately for comparative purposes, that is not available before 1836.

Although the early statistics are crude and extrapolations from them are unreliable, they suggest that enrollments first exceeded 100 about four years after Union occupied Stone College in 1804, and passed 200 about four years after the move to the present campus in 1814.

Enrollment slightly exceeded 300 at the end of 1838 and 1839, but then went into a decline, rallied somewhat in 1848 and 1849, and fell to 183 in 1852. From there it rose rapidly to the probable high point of the nineteenth century: 325 at the end of 1859 (according to the Regents report, but 440 in that year according to Hough).

The causes of these fluctuations are unknown, but the decline beginning after 1859 was clearly triggered by the CIVIL WAR. (The war's effects, and the factors that prevented the College from recovering as other institutions did, are described in the article on that subject. Among these factors, the often-blamed withdrawal of SOUTHERN STUDENTS was nugatory.)

The decline from 1859 continued inexorably until 1872, when enrollment hit a bottom of about 80. The administration of president ELIPHALET NOTT POTTER (1871–84), though ultimately disastrous, gave an immediate boost to enrollment (he channeled some of the proceeds of his fund-raising into scholarships), and about 176 students were attending the College at the end of 1877. Open warfare between Potter and his opponents, beginning about 1882, seems to have depressed enrollments, and when the trustees were unable to agree on a successor after Potter resigned in 1884, the size of the badly demoralized student body declined by fifty percent over the next four years, to about 90. In early 1888 most of the remaining students rallied and marched to protest trustee inaction, threatening to transfer to another college if a president was not chosen.

The administration of Harrison Webster (1888–94) saw enrollments begin to climb again. Under his successor, ANDREW V.V. RAYMOND, the College grew stronger in several ways, but enrollment at first fell from 252 in 1895/96 to 182 in 1899/1900, before beginning a steady rise to about 800 in 1927.

Many factors contributed to the College's recovery in the early twentieth century, including the successful presidencies of Raymond and CHARLES ALEXANDER RICHMOND, the financial stewardship of treasurer FRANK BAILEY '85, and the popular new electrical engineering program under CHARLES STEINMETZ, but it must be noted that this was a period of strong growth for American colleges. Enrollment in colleges generally tripled between 1890 and 1914; Union's gain for the period was a little more than that.

Limitations. Eliphalet Nott apparently never specified an ideal size for the College. Although he believed

the institution should take parental responsibility for students, and required them to live in dormitories under faculty supervision, when the dormitories and the repurchased old West College were filled, he allowed students to lodge in the city. Colleges had not yet acquired admissions departments or any of the techniques by which they would later try to control the size of an entering class; Union simply admitted any qualified student who showed up.

From the Civil War through the end of the century, there was no need to think about limiting enrollments. In 1899, when Union had about 182 students, and prospects had brightened, President Raymond suggested that 400 would be the ideal size, but the College did not even reach 300 until a decade later, after he had resigned. Under President Richmond, rapidly rising undergraduate enrollment passed 400 in 1913/14, 600 in 1919/20, 700 in 1923/24 and 800 in 1925/26.

Arguing in the December 1924 *Union Alumni Monthly* for a cap of 600, editor CHARLES WALDRON raised an issue separate from the limitations that physical facilities place on enrollments:

The true measure of a small college is determined by that number which permits the executive officers and the heads of departments of instruction to possess a personal knowledge of the student body. Whenever such an officer or a department head has to resort to machinery or any considerable number of rules in dealing with the boys, we feel that such a college has passed beyond the point where small numbers are an educational advantage.

These considerations were never again publicly raised. In the future, enrollments would be limited primarily by physical facilities. A secondary consideration would be the institution's willingness to increase the proportion of commuting students.

The minutes of the January 1929 trustee meeting record a deceptively casual decision:

After some discussion about the size of the student body, it seemed to be the sense of the trustees that the students should not exceed approximately 800 in the undergraduate body for some little time to come.

That cap was observed through 1941, although during the Depression years and as late as 1940 it was often not a limit but a goal; Union sometimes bent its admission standards (but not its 8–10 percent Jewish quota) in order to keep enrollments up. Because an admissions shortfall produced a drop in tuition income which could seriously affect the budget for the coming year, the admissions directors were frequently under pressure from treasurer Bailey to fill the classes.

The SECOND WORLD WAR wreaked havoc with the College's enrollment, removing, through the draft and enlistments, a majority of the regular students, and then, with inauguration of the Navy V-12 program in July 1943, flooding the College with naval trainees. In

the midst of this turmoil, President Fox presented a closely reasoned argument, embodied in a twenty-seven-page memorandum on post-war planning ("Memorandum presented by President Fox to the Faculty Council...August 10, 1943"), for eventually returning to a student body of 800.

After the war, the College felt an obligation to accept not only former Union students who returned to finish their course, but other veterans enrolling under the G.I. Bill. Because New York had no state university system, the state's eighty-five independent colleges agreed to expand their facilities to the limit to make room for the veterans.

Union's undergraduate population swelled to 1,359 in the spring of 1947, but the College's housing capacity had been reduced during the war as several fraternities gave up their off-campus houses. To accommodate the influx, the College quickly erected the nineteen-building DUTCHMEN'S VILLAGE on the Nott Street side of the campus and five other buildings of temporary VETERANS' HOUSING in the Pasture. The immediate future was difficult to predict; in the spring of 1947 the administration expected that the fall term would see the student body shrink to what it called the "optimum enrollment" of less than 1,000, and the consensus of the trustees at their June 1947 meeting was that the College could operate best with an enrollment between 800 and 900. But the veterans kept coming; in the fall of 1947 enrollment grew to 1,500, and it was not until 1950/51, which the College began with an enrollment of 1,091, that the bulge had largely dissipated. WEST COLLEGE, designed for 124 freshmen, opened in 1950, and College policy changed to require all resident freshmen to live in dormitories rather than in fraternity houses. Enrollment continued to decline until 1953/54, which began with 916 undergraduates.

Responding in that year to a query from the Board of Regents, the trustees predicted a maximum enrollment through 1970 of 1,200. In June 1959, at the end of a year which had begun with 1,094 undergraduates, the board's development committee estimated that the College would grow to 1,170 undergraduates by 1966 and 1,255 by 1970. This modest growth would be accommodated by RICHMOND HOUSE, due to open in 1960, and by POTTER HOUSE and RAYMOND HOUSE, which opened in 1961. In May 1961 the trustees adopted and published *Basic assumptions for a long-range planning and development program*; one of the assumptions was "that the College will reach a maximum enrollment of about 1,250 students during the next decade."

With enrollment at about 1,230, the trustees voted in January 1964 to expand to 1,500 "in the next few years." In June 1969, with a projected fall enrollment of 1,630, the board decided to increase the size of the

student body to 1,900–2,000 by 1974/75. This increase followed from the decision to begin admitting women without reducing the number of men in each class (see WOMEN AT UNION). Enrollment reached 2,000 in the fall of 1975 and remained quite stable through the end of the period covered by this book.

Union's Relative Size. Often-heard claims to the contrary notwithstanding, Union was never the largest American college in terms of enrollment; Yale's undergraduate population was always larger, usually by at least one hundred students. Union came closest at the end of 1818/19, with 259 students (according to the catalogues) or 240 (according to Hough), compared to Yale's 265. For three decades, however—from 1820 through 1851, excepting only 1832 and 1836—Union graduated more students than Harvard, and in eleven of those years, 1820, 1824, 1829, 1830, 1834, 1835, 1838, 1839, 1841, 1846 and 1849, Union's graduating classes were also larger than Yale's. Union's lead was greatest in 1830, when it reached a new high of 96 while Yale dipped to 71 (Harvard awarded 48 bachelor's degrees that year).

Union ranked higher in students graduated than in total enrollment because its junior and senior classes were usually larger than its freshman and sophomore classes. This frequently-remarked phenomenon remains to be carefully studied. Probable causes include Nott's willingness to admit students expelled from other colleges (see BOTANY BAY), his resourcefulness in reforming errant young men that other institutions would have dismissed, and the fact that some students transferred to Union to take his senior year course in Kames (see KAMES (ELIPHALET NOTT'S COURSE IN)).

The two different measures of college size—total enrollment or size of graduating class—have often been muddled, and the span of years for which claims could be made for Union has frequently been exaggerated. Union was never first in graduates for more than two consecutive years, and it slipped from contention for the lead at mid-century, well before the Civil War. The claims have also sometimes been expanded to suggest that Union was consequently the "best" college in America. The questions of past quality and reputation await systematic investigation—a difficult and perhaps tendentious undertaking. While there is no reason to expect that Union would fare poorly in such a ranking, it might be rash to assert that biggest was necessarily best in the past, while denying that a positive correlation still exists.

Epsilon Nu (Alpha chapter). A Union chapter of Epsilon Nu was founded October 4, 1876, and a Beta chapter was subsequently established at Williams College. Nothing more is known of it; it may have been a sophomore society.

Equitable Union. The Equitable Union was founded in October 1838 by several seniors who believed (they wrote in the constitution) "that secret societies, as they exist in this College, tend directly to create distinctions entirely factitious, and anti-republican; to produce endless strife and divisions; thereby destroying the harmony and interrupting the prosperity of the Institution."

The society seems to have arisen primarily because the four existing secret societies treated class and literary society offices as spoils. Although the Equitable Union very quickly had more members than any fraternity (101 members of the Classes of 1839–42), and was in a position to thwart the political designs of the secret societies, we don't know whether they succeeded in doing so. By 1841/42, the Equitable Union was dormant, but it was revived in 1845 with sixty members.

The revived society, like its predecessor, was greeted with hostility by the secret societies, who excluded it from the College catalogue they published in 1845. The Equitable Union responded by publishing its own catalogue, and in 1850 began a small pamphlet war with a tract entitled *Secret societies in college*. In the early years, the society saw itself not simply as an alternative to fraternities but as their sworn enemy. Robert Stickney '39 proclaimed in an 1839 address, "We aim not only to rid the Institution of gross and palpable evils, but to shield the innocent and unwary from deception and ruin."

A similar group, called the Social Fraternity, had been formed at Williams College in November 1834—the Equitable Union borrowed much of the language of their constitution—and other anti-secret societies had been formed at Hamilton and Amherst. On July 10, 1847, representatives of the Union, Amherst and Hamilton groups met in Schenectady. At a second meeting held four months later in Troy, the three societies, joined by another from Williams, agreed to form an Anti-Secret Confederation. The alliance published catalogues in 1847, 1850, and 1853, and by 1853 five more institutions had joined: the University of Vermont, Wesleyan University, Waterville College (later Colby), Western Reserve College, and the University of Rochester.

One consequence of this loose affiliation was that the names of the local organizations tended to become similar. By 1850 Union College's Equitable Union was being called the Equitable Fraternity (the name the confederation recommended for all chapters in 1851). It was also called the Anti-Secret Society and, like the secret societies, it was sometimes known by the Greek first letters of its Greek motto "Ouden Adelon" ("nothing secret")—hence Omicron Alpha or Alpha Omicron (or OA or AO).

There were also schisms. After the pamphlet war of 1850 the Equitable Fraternity seems to have ceased attacking the secret societies, and in 1854 there was serious dissension within the society, focusing on the issue of whether the society should, like the secret societies, have its own meeting hall. All but seven members withdrew, and in the fall of that year Union had both an Anti-Secret Fraternity and a Social Fraternity, with different members. This situation may have reflected a division within the movement between those for whom the tenet of anti-secrecy was central and the aping of the secret societies anathema, and those who, while still distancing themselves from the secret societies, sought a more positive emphasis.

The College gave the society a meeting room in North Colonnade in 1855, but beginning in 1856/57 members met in rooms at the foot of the Union Street hill.

Within the Confederation, too, there was from at least 1852 a feeling among some members that anti-secrecy should not be the basis of the society. This issue was raised at conventions, and finally Williams withdrew in 1862, allowing the remaining members to change the bylaws so that members no longer had to avow "conscientious and entire opposition to the principle of Secret Associations in Colleges."

In 1858, the Confederation adopted a new motto ("Dikaia Upotheka"—"Justice our Foundation") and some chapters began to use a new name, Delta Upsilon, based on the motto. The Union chapter apparently began to use it in 1861, but the chapter, already weak (it had failed to send representatives to the 1857, 1858, and 1861 annual conventions), died out entirely with the graduation of the Class of 1863.

The remains of the Confederation officially restyled itself Delta Upsilon in 1864, and in 1869 a revived Union chapter became a chapter of DELTA UPSILON.

See also: *THE SPY-GLASS*.

Eta Kappa Nu (Phi chapter). A national electrical engineering honor society founded at the University of Illinois, October 28, 1904, Eta Kappa Nu established a chapter at Union in January 1926, largely through the efforts of ERNEST BERG. The chapter became inactive after 1938, but was reactivated in the spring of 1967.

ETH Exchange Program. From 1961 through the end of the period covered by this book, Union sent one or two students annually to the Eidgenössische Technische Hochschule in Zurich, and during many of those years the Swiss institution sent students to Union under an exchange agreement. The ETH (the initials are pronounced in German "Ay Tay Hah") is perhaps best described as the Swiss federal institute of technology.

Union had participated since 1935 in the SAINT ANDREWS EXCHANGE PROGRAM, sending a student each year to the Scottish university and hosting a St. Andrews student at Union. Valuable as that exchange was, it was usually not found suitable for Union's engineering students because St. Andrews did not offer technical courses comparable to those in Union's curriculum.

The prime mover in setting up an exchange program for technical students was Walter Lowen, who taught mechanical engineering at Union from 1947 until 1968. The German-born Lowen, who had a strong interest in international cooperation, wrote to CARTER DAVIDSON in 1958 suggesting that the president, who was planning a trip to Europe, consider setting up a cooperative arrangement with some European universities for exchange of students. Lowen initially envisioned up to forty Union students spending up to a year-and-a-half in study abroad, followed by a final year or two at Union. In the early years the program was conceived as part of the five-year AB-BS joint degree program in engineering.

After protracted negotiations with the Swiss institution, and a search for five-year engineering majors sufficiently proficient in German, Lowen selected the two men who would pioneer the program in 1961/62—mechanical engineering major Arnold Mindell '62 and electrical engineering major J. Lawton Morrison '63. Lowen himself was in residence at the ETH that year, earning a doctorate. Before the year was out, finding that the American students seemed to be doing well, the ETH suggested establishing a formal exchange, an offer Lowen and Davidson were quick to accept.

The two institutions were very dissimilar; the ETH was a large urban university (6,000 students in 1961, and growing), with no campus, and by American standards Swiss society was highly regulated (Mindell reported spending two days going from office to office getting documents approved). Believing that learning to cope with a different culture was one of the benefits of the program, Lowen deliberately gave students only limited guidance.

Educational differences were also large. American students could enroll only as auditors, taking special examinations on their return to Schenectady. Because Swiss higher education was geared to batteries of examinations at the end of the second and fourth years, very few ETH students dared to take a year out as undergraduates, and nearly all who came to Union were graduate students in the Institute of Administration and Management (see GRADUATE MANAGEMENT INSTITUTE) or in computer science. In a few cases, the exchange student was actually from another Swiss institution. In later years, most Union participants were majors in science rather than engineering.

After the program had begun, a Swiss law limited foreign students to three months of residence, but the Union-ETH program enjoyed a "grandfather" exemption.

Following Lowen's departure in 1968, the program was briefly administered by electrical engineering professor THEODORE SCHWARZ; then, from about 1972, by chemistry professor William Martin. On Martin's retirement in 1989, biology professor Robert Olberg assumed the responsibility.

—William B. Martin Jr.

Evening Division. Appointing professor THOMAS CHURCH BROWNELL to deliver a course of lectures on chemistry in 1811, the trustees specified that "any individual not a member of College may (on paying or securing to be paid to the Treasurer Twenty dollars) be admitted to attend one entire course of Lectures in Chemistry." Nothing is known of the duration or success of this venture. Although Union made provision from 1796 for enrolled students who were not seeking degrees (see UNIVERSITY STUDENTS), the next courses open to anyone except matriculated students were not offered until the end of the nineteenth century.

On Saturday mornings, beginning October 14, 1899, the College offered a choice of five lecture courses, open to all comers at five dollars per course. Attendees could choose to be examined for a certificate. The courses were Mediaeval History (BENJAMIN RIPTON), Rhetoric and Style (EDWARD EVERETT HALE), Life and Monuments of Antiquity (SIDNEY ASHMORE), Greek Literature (JOHN IRA BENNETT), and Life and Evolution of Living Forms (JAMES STOLLER). Nothing is known of the success or duration of these courses.

In 1908 the trustees authorized the Education Committee to "devise and put into operation a plan for Evening Courses of Instruction in certain subjects in case further investigation should lead to the conclusion that such courses can be prosecuted with advantage and success," but further investigation apparently supported the opposite conclusion.

Union's Evening Division can trace its origins to the autumn of 1914, when the Schenectady section of the American Institute of Electrical Engineers sponsored a series of evening lecture courses. These included a geology course given at the College by James Stoller. The next year economics was added, and in 1916/17, with the sponsorship of General Electric, about one hundred students, most of them from GE, were enrolled in Union's five evening courses in mathematics, physics, chemistry, English and economics. The courses consisted of thirty weekly sessions of ninety minutes each. GE refunded half of the ten dollar tuition to its employees who attended at least eighty percent of the sessions. By the fall of 1918, the College was also giving three courses in cooperation with the American Locomotive Co.

In 1917/18 the course offerings were expanded and open to the general public; women were accepted by 1919, if not immediately. Each fall, in these early years, the president addressed a joint meeting of all evening division students.

In 1919/20, enrollments reached 326 students. Engineering and scientific courses drew the most students, but the College also offered courses in psychology, public speaking, English composition, French and Spanish. In February 1921 the College added extension courses in swimming and gymnastic practice "for business men and women."

From the outset, however, the evening division courses primarily served the needs of local industry. This was dramatically illustrated in 1921/22 when attendance fell off by about two-thirds because GE laid off many workers and the American Locomotive Co. shut down for most of the year. The companies and the course enrollments rebounded (though enrollments never reached the same level). The departments of history, philosophy and political science added offerings in 1927, but the 1929 depression precipitated a new crisis.

President FRANK PARKER DAY, who took office in 1928, felt, with much of the faculty, that the evening division courses should either be upgraded to a level that would justify giving academic credit for them, or else they should be abandoned. In 1930, with enrollment at 232, the trustees decided that it would be too expensive to upgrade the courses, and the program was all but terminated; four faculty members continued on their own initiative to teach a few courses during 1931/32.

The fall of 1932, however, saw an abortive reversal of the decision to end the program. Acting President EDWARD ELLERY announced that the College would offer evening classes for credit in any course listed in the regular catalogue, provided at least twenty-five people signed up for it. No course attracted enough students to be given.

At the same time, the College began somewhat reluctantly to offer the full freshman year, for academic credit, in late afternoon courses at Nott Terrace High School. The courses were open to both male and female students who met the entrance requirements of Union or of another college which they intended to enter as sophomores. Eight male and thirteen female students enrolled in this program. The College began it only because the Superintendent of Schools threatened otherwise to enter into a similar arrangement with Syracuse University; Union feared losing students who would have entered Union as regular undergraduates. The program ended after one year, and there were no more extension courses until the Second World War.

During that conflict, Union College participated in the federal ENGINEERING, SCIENCE AND MANAGE-

MENT WAR TRAINING COURSE to train workers for war industries. Between December 1940 and June 1945, more than five thousand persons attended brief evening courses at Union as part of this program, which was directed by Professor MORTIMER SAYRE.

On March 6, 1945, the Faculty Council, anticipating that many returning veterans would prefer to attend college part-time, recommended the resumption of evening courses. These first evening division courses given for credit began the next fall under the direction of Professor Sayre. Once again, in 1946/47, the College offered an evening (4 pm to 10 pm) program of freshman studies for area students who could not matriculate at college because of overcrowding. Forty-two students enrolled, including two women.

Although evening division courses began to be offered for credit in 1945, it was not until 1955 that the faculty approved granting the AB and BS degrees for credits achieved in evening courses. This change resulted in an immediate jump in evening division undergraduate enrollments from about 220 to about 600, taught by about two-fifths of the regular faculty. For the first time, an administrative staff was appointed for the program.

Enrollments quickly subsided from that peak, and generally fluctuated between 300 and 500, breaking the upper figure again only in 1965–67, and sinking below 300 only in 1973 and at the end of the period covered by this book. In recent decades Union's undergraduate evening courses have faced stiff competition from less expensive courses offered at the State University and at the Schenectady County Community College.

While undergraduate enrollments remained relatively constant, graduate enrollments increased dramatically. Standing at only 16 in 1948, they overtook undergraduate enrollments in 1966 and peaked at 1,014 in 1970 (the year in which Union began its doctoral programs in "Life Sciences and Systems" and "Administrative and Engineering Systems.") Graduate enrollments soon settled down in the 600–800 range. Many, but not all, graduate courses were given in the evening or late afternoon, though some of those were also attended by regular undergraduate students.

In 1948, following organization of the Union College Secretarial Association, "administrative secretarial personnel" were allowed to take evening division courses tuition free. That benefit was subsequently extended to all of the College's employees, and continues to be offered.

Administration. Professor Sayre was succeeded as director of the evening division in 1949 by Professor AUGUSTUS FOX; he was followed by Professor Frederick Klemm (1952–55) and by Provost Alan Brown (1955–57). After serving from 1957 to 1960, Professor Neal Allen turned the post over to H. Gilbert Har-

low, the last member of the regular faculty to direct the evening division. John R. Haines was appointed Director of Special Programs in 1962, and on his departure in 1964, William Weifenbach became Assistant Dean for Special Programs, serving until 1975. His successors, as Dean of Graduate and Continuing Studies have been Aaron Feinsot (1976–85) and Arnold E.S. Gussin, who served through the end of the period covered by this book.

Everyman's Supper. Everyman's Supper was a dinner given at Commencement, 1912–26, for alumni other than those in reunion classes. No presiding officer was designated in advance, and music took the place of speakers. It was abolished for lack of interest.

Faculty. A faculty may be seen as simply the most necessary part of the institution's workforce, a group whose history one might satisfactorily write—given much fuller records—in terms of size, responsibilities, compensation and conditions of employment. But a faculty can also play a larger role that can scarcely be defined, let alone chronicled: the sometime keeper of the institution's intellectual pride, passion and conscience, the fitful determiner—in the long intervals between successful presidential initiatives—of its style. It would be as erroneous to suppose that Union's faculty never played such a role as to pretend that it did so consistently and always successfully.

While it is impossible to write the faculty's full history at either level, it may be useful to gather some of the fragmentary information that would support such a history.

Size and Composition of the Faculty. Union began teaching in the fall of 1795 with a faculty of one, Col. JOHN TAYLOR, who had been in charge of the SCHENECTADY ACADEMY. He served also as the College's acting president until first president JOHN BLAIR SMITH arrived in December and began to share the teaching load. Until a professor of French was added in 1805, the faculty consisted of the president, a professor of Greek and Latin, and a professor of Mathematics and Natural Philosophy. With gradually increasing enrollments, additional faculty were added in these fields, but large areas of the present faculty structure did not exist until much later. The first engineering professorship was established in 1845, and with minor exceptions, all of the separate social science and arts professorships were twentieth-century creations. To the extent that those subjects were taught at all in the nineteenth century, they were usually the minor responsibility of a professor in another field.

ELIPHALET NOTT took office in 1804 with a faculty limited to his brother-in-law, BENJAMIN ALLEN, and two tutors; the classics professorship was vacant at the time. When Nott died in 1866, the active faculty